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ARTICLE II.

RAILROADS OF MASSACHUSETTS. NO. IV.

WITHIN the last year, the system of Massachusetts railroads, having its centre in Boston, has been brought into complete operation. All the main lines of railroad, and their several branches within the State, which have been begun, and all which are necessary for the successful developement of the system, are completed. Several works for the farther extension of some of the lines of road, beyond the limits of the State, are yet in progress; and others are meditated, which will serve to extend the utility of the works already completed. One or two branches, also, within the State, have been projected, which will probably be carried into execution, at no very remote period; but these are not necessary for the successful operation of the lines already completed.

This system of works consists of four distinct lines of railroad, all taking their departure from different parts of the city of Boston, each in a different direction northerly, northeasterly, westerly, and southerly; each line consisting of the works of three or more independent companies, and each connected with railroads, extending beyond the boundaries of the State. We shall give a cursory review of the present state of each of these lines of railroads, and of the success of their operations during the past year.

These lines are, 1st, the *westerly* line, consisting of the *Boston and Worcester* railroad, 45 miles in length, with a branch to Millbury of 3 miles; the *Western* railroad, from Worcester to the state of New York, 117 miles in length; the Albany and West Stockbridge, from

the border of the state of New York to Albany, 38 miles, built by the Western Railroad Company, under a lease from its proprietors; the *Hudson and Berkshire* railroad, uniting with the Western road at the Massachusetts line, and extending to Hudson, 33 miles; the *West Stockbridge* railroad, uniting with the Western at the same place, 1 1-2 miles; and the Norwich and Worcester, uniting with the Boston and Worcester road at Worcester, and extending to Norwich, in Connecticut, 59 miles; about 20 miles of which are in the state of Massachusetts. The extent of this line of connected works, already completed and in operation, is 296 miles, of which 186 miles are in Massachusetts, and 110 in New York and Connecticut.

The proposed extensions of the line are, by the Berkshire railroad, which is now in the course of execution, and to be completed in the ensuing summer, which is to extend from West Stockbridge to the north line of Connecticut, where it will unite with the Housatonic railroad, extending thence to Bridgeport, on Long-Island Sound. Another proposed extension is by the Hartford and Springfield railroad, 25 miles in length, to be extended also to Cabotville, for which surveys and estimates have been made, and a charter has been obtained, but the stock is not yet taken up. This addition to the line, if completed, will unite it with the New Haven and Hartford railroad, and thus open a new line of steam communication between Boston and New York, by means of steamboats from New Haven, and probably, at a period not far distant, by a railroad from New Haven to New York. Two other additions to the line, for which projects have been entertained, and surveys made, affording favorable results, are, a branch of the Western road, by way of Cabotville to Northampton, and a branch of the Boston and Worcester road, from Westborough to Lancaster and Fitchburgh, with the power of extension indefinitely towards the northwest. These projects are not likely to be executed for some years to come.

In consequence of the great extension of this line, and the probability of a large increase of the number of trains on the main track, the directors of the Boston and Worcester road are laying down a second track, on their part of the line. This second track is already laid on 20 miles of the road, from Needham to Westborough, and it is to be farther extended during the ensuing year. For the purpose of accommodating the increased business to be expected from the extension of the line, the depot buildings in Boston have been enlarged upon a liberal scale. The lands and buildings in Boston have cost about half a million of dollars. The main track terminates in a two-story passenger building on the westerly side of Lincoln street, 290 feet in length, contiguous to which are buildings for the storage of passenger cars. On the opposite side of the street, a large freight-

house is erected, of brick, with a slated roof, 466 feet in length, and 120 feet in width, which is entered by four lines of tracks for freight cars. In this building, which has an area of 56,000 feet in a single room, without partitions or pillars, and covered with a strongly framed roof, the inward freight is unloaded upon one side, from the cars, upon a platform or floor, raised to the level of the floor of the cars; and the outward freight is loaded from a similar platform on the other side. The building is provided with platforms and scales, for weighing merchandise, with or without the cars, and with apparatus for the convenient transfer of the cars from one track to another. In immediate connexion with the freight depot are two wharves belonging to the corporation, upon which lumber and other heavy merchandise may be unloaded from vessels, and placed directly upon the cars, and unloaded directly from the cars to the vessels. In the vicinity of the freight-house, besides other freight buildings, are a freight car-house, traversed by three tracks, an engine-house, machine-shop, and other repair shops.

At Worcester the corporation has a large freight-house, a passenger-house 297 feet in length, in connexion with a similar house belonging to the Norwich and Worcester road, and an engine-house in connexion with that corporation, of a dodecagon form, with a large turning-table in the centre.

The rails of the second track weigh 60 lbs. to a yard, are 16 feet in length, are supported on six cross-sleepers to each rail, placed nearer each other towards the ends of the rails than towards the middle, and are fastened at each end by heavy cast-iron chairs, closely fitted to the rails, and spiked to the sleepers. The sleepers are laid upon a bed of gravel, all clayey earth being removed to a depth of 2 1-2 feet, and the bed being carefully drained.

The cost of this railroad, including depots, engines, and cars, up to the 1st of December last, exclusive of repairs, was \$2,374,547. Of this amount \$50,000 have been paid by appropriations from time to time from the income to a reserved fund, to make good deterioration from wear or decay, beyond the amount of repairs. The amount of capital paid in is \$2,300,000, and the company is authorized to increase it to \$3,000,000. A farther expenditure of 3 or 400,000 dollars will be necessary to cover the cost of the whole of the second track, and to complete the road and buildings in the manner now intended. This will raise the average cost of the road, including buildings, engines, cars, and all appendages, to about \$60,000 a mile.

There having been, during the whole of the last year, four daily passenger trains over the road each way, except on Sundays, and one or more freight trains. The quantity of merchandise transported

on the road in the 11 months to the 1st of December, was 39,255 tons, 19 cwt. ; of which amount 17,677 tons 18 cwt. were transported over the Boston and Worcester road only ; 18,254 tons 18 cwt. conveyed to or from the Western railroad ; and 3,323 tons 3 cwt. to and from the Norwich and Worcester road. The number of locomotive engines owned by the corporation, is 16. The amount of receipts and expenditures during the past year will be seen stated in a table given in a subsequent part of this article.

For the transaction of business on this line, the station accommodations for passengers and freight are provided, and the labor and responsibility of the reception and delivery of merchandise is at the charge of the Boston and Worcester railroad ; and the like services for goods despatched to and received from the Western and Norwich and Worcester roads, which require to be performed upon these roads, are done under the direction and at the charge of the officers of these roads respectively.

The Western railroad has been in regular operation during the whole of the past year, in the transportation of passengers and freight, between Worcester and Springfield. It was also in operation through a part of the western section, during the summer, and near the close of the year it was opened through from Springfield to Albany. The monthly receipts from passengers, the total receipts, including the produce of freight and mail transportation, the current expenses, and the miles run by locomotive trains, during the year, are exhibited in the following table :

	Passenger receipts.	Total receipts.	Expenses.	Miles run.
1841. January,	\$ 3,318	\$ 8,080	\$6,529	6,932
February,	3,417	7,770	6,160	6,177
March,	5,320	10,275	6,406	9,393
April,	5,287	10,692	5,974	10,342
May,	6,280	12,006	6,138	10,300
June,	8,311	12,448	6,802	12,800
July,	12,443	16,494	6,810	11,900
August,	17,462	22,522	7,667	12,832
September,	17,093	23,560	9,410	15,680
October,	14,170	20,843	9,796	16,997
November,	10,639	18,338	11,968	16,217
December,	10,102	19,251	21,148	18,036
	113,842	182,309	114,806	147,606
Distance run west of the summit,				12,500
				160,106

In a former Number, [Vol. II. p. 252,] we gave an account of the progress of the work on this railroad, to the middle of the last summer. Its progress since has realized the anticipations then formed. The

running of the cars from the Connecticut River to Chester Factories, was begun on the 24th of May, thence to the summit on the 13th of September, and across the summit to the State line, on the 4th of October. From that time regular trains of passenger cars were run through the line, in connexion with the Hudson and Berkshire railroad, from Springfield to Hudson. Trains in connexion with the Hudson and Berkshire road had been previously run, from the 4th of May, over the westerly portion of the Western road, to Pittsfield.

The work on the Albany and West Stockbridge railroad was so far completed, that on the 4th of December it was ready for the reception of locomotives from Greenbush to Chatham Corners, a distance of 23 miles; and by the use of a portion of the Hudson and Berkshire road, for a distance of 15 miles, under a temporary lease of that road, a continuous line of railroad was formed from the State line to the Hudson River, opposite to the city of Albany. Regular trains were from this time arranged, to run twice a day from Boston to Albany, performing the journey in 11 1-2 hours, and these have continued through the winter. On the 27th of December, the opening of the road was celebrated, by a visit of the Mayor and City Council of Boston, with other gentlemen invited, to the number of near 150, to Albany, where on the following day they partook of a public dinner, in which the city authorities, the governor, and principal state officers, and many other gentlemen participated. The visitors were also entertained by various other acts of courtesy and attention on the part of the city authorities and their friends in Albany. On the 29th, the Boston party were accompanied, on their return to Boston, by the Mayor and City Council of Albany, and a large party of other gentlemen invited, who were entertained, with other guests, at a dinner at the United States Hotel, in Boston. On the 31st, the Albany party returned to that city. The several journeys were performed on this occasion without accident, in periods of from 10 to 11 hours, by which it was demonstrated that large trains of passengers may with ease traverse the route in the space of a winter day.

The principal portion of the works yet to be accomplished on this railroad, is the improved line of 15 miles in length, from the State boundary to Chatham Corners, in New York, which is to be substituted for the portion of the Hudson and Berkshire road, now used under a temporary lease from that company. This part of the new line will have, when completed, no higher grade than 40 feet in a mile. The whole is to be completed under the contracts now in progress of execution by the 1st of August next. The amount expended to the 31st of December last, on the Albany and West Stock-

bridge road, was \$734,840, exclusive of \$70,000 paid to the sinking fund, for the redemption of the Albany loan.

The actual cost of the western section of the Western road, now nearly completed, is not yet fully ascertained. The last estimate which has been made, stated it at \$3,218,050; that of the eastern section at \$2,016,970; and that of the Albany and West Stockbridge at \$1,412,804; making a total of \$6,647,830. The funds provided for this expenditure to the 1st of January last, were the assessments of \$60 per share on the capital stock of 30,000 shares, making \$1,800,000; three loans of Massachusetts state scrip, amounting to \$4,000,000; and Albany city scrip of \$1,000,000, with a deduction of 10 per cent. for the sinking fund, \$900,000, making a total of \$6,700,000.

Of the scrip authorized by law to be advanced to the corporation, there had been received by them on the 31st of December last the amount of \$3,700,000, and the principal part of it was placed in the hands of their agents in Europe for sale. Of this scrip, bonds to the amount of \$1,463,555 56 had been sold previous to January 1, 1841, at various rates, from par to 4 per cent. advance, and producing the sum of \$1,485,777 78. Since that time, in consequence of the discredit into which American securities in general have fallen in Europe, no sales of the stock have been made, as it was not deemed expedient to submit to the sacrifice which would have been necessary to effect such sales; but considerable advances have been made upon it by the agents in Europe, and loans have been obtained on the same security in this country. Neither the State scrip, nor that of the city of Albany, has been offered at less than par. To have thrown the stock upon the market for the purpose of meeting the immediate wants of the corporation, would have been injurious to the credit of the State, as well as a sacrifice of the interests of the corporation. The directors, therefore, deemed it expedient to resort to another course. They promptly resolved upon levying two additional assessments of \$10 each per share, payable on the 20th of January, and 1st of February. This unexpected call upon the stockholders was met by them with cheerfulness, under the conviction that it was the most eligible course which could be adopted, and before the second assessment became due, the sum of \$114,000 had been paid on the call. Since that time a farther assessment of \$20 a share has been levied, making the whole amount which can be legally assessed, payable on the 1st day of March, 1842.

It was mentioned in the former article above referred to, [Vol. II. p. 260,] that the Western railroad corporation had entered into an agreement with the Albany and West Stockbridge railroad company, to construct the railroad from the State line to Albany, in considera-

tion of being permitted during the period of said lease to have the management and control thereof, and to receive the tolls and income of the same. In pursuance of this agreement, an indenture was entered into and executed on the 18th of November, 1841, by the Albany and West Stockbridge railroad company of the first part, and the Western railroad corporation of the second part, by which the first-named party, in consideration of the covenants entered into by the other, leased to the said party of the second part, their successors and assigns, the whole of the said Albany and West Stockbridge railroad, with all the property, rights, and privileges thereto appertaining, including the right to receive the bonds or scrip of the city of Albany, to the amount of \$1,000,000, to be issued to aid in the construction of said road, and to be made payable one quarter in twenty-five years, one half in thirty years, and one quarter in thirty-five years, with interest semi-annually, on the 1st days of January and July, the interest and principal to be paid at the office of the Western railroad corporation in Boston, and with full power of using the said railroad and property, and of establishing and collecting tolls, fares, and rates of compensation, for their own use and benefit, as freely as the party of the first part could do. The lease is for the full term of the continuance of the date, and any renewals or extension of the same, and is subject to the mortgage of the said property and rights to the city of Albany to secure the payment of the principal and interest of the said bonds. The party of the second part engage, as a rent or compensation for the use of the said road, punctually to pay the interest on the said bonds, as it shall fall due, and after applying the proceeds of the sinking fund to pay any balance which may be due of the principal, they agree to finish the construction of the railroad, with at least a single track, and with the necessary depots, engines, and cars, and to open the same for the public accommodation. They also agree, that in case the New York and Albany railroad shall be finished, so far as to unite with the Albany and West Stockbridge railroad near Chatham Four Corners, they will either permit the said company upon the payment of a reasonable compensation, to use with their engines that part of the road between the point of junction and Greenbush, in such manner as not to interfere with or interrupt the regulations of the Western railroad company; or that they will transport over the said portion of the road the passengers and merchandise of the regular trains of the New York and Albany railroad company, on as favorable terms as they transport the average of passengers and similar merchandise on other parts of their said road, between the point of junction and Worcester, and without any other delay than may be necessary to avoid collision with other trains; cars to be provided by the New York and

Albany railroad company, and to be returned within reasonable periods by the Western railroad corporation. It is farther agreed, that in case of any disagreement in the execution of these provisions, the matter in issue shall be decided by three commissioners, to be appointed by the Chancellor of the state of New York.

The *Norwich and Worcester* railroad, which forms the remaining principal branch in this line of roads, has been already described in our former Numbers, [Vol. I. p. 265, and Vol. II. p. 268.] The receipts of income on this road during the year 1841 amounted to \$151,927, of which \$99,332 were received for the transportation of passengers, and \$52,595 for freight. Of the passenger receipts, considerably more than half, or \$58,784 were derived from passengers in the steamboat train, which forms a part of the daily line of communication between Boston and New York.

The expenses during the year amounted to \$64,039, of which \$6,322 were for repairs of road, \$7,762 for repairs of engines and cars; and \$16,782 for fuel.

The second line of railroads, leading from Boston in a northerly direction, consists of the *Boston and Lowell* road, 26 miles in length; the *Nashua and Lowell*, 14 1-4 miles in length; and the *Boston and Portland*, in Massachusetts and New Hampshire, 54 miles in length. These roads are already completed for the distances here named, making a length of railroad of 94 1-4 miles, now in operation. For the farther extension of the line, the *Nashua and Concord* railroad, in New Hampshire, 34 miles in length, is far advanced towards completion, and will be opened in the ensuing summer; and the *Boston and Portland* railroad is in progress of farther extension, from Dover to Somersworth, on the border of the state of Maine, and in a direction towards Portland. It is the purpose of the proprietors to obtain authority to unite this railroad with that now in progress from Portsmouth to Portland, at a point between Somersworth and Kennebunk. But should it be extended only to Somersworth, the addition thus made to the present length, together with the *Nashua and Concord* road, will give an extension to this line of roads, to be completed in the ensuing season, of about 132 miles in all.

In the course of the past season, the whole of the second track of the *Boston and Lowell* railroad has been completed. It is formed throughout of heavy T rails, weighing 56 lbs. to a yard in length, laid upon cross-sleepers of stone, these being placed upon a bed of gravel two and a half feet in depth. The rails originally laid on the first track, weighing only 36 lbs. to the yard, having been found too light, have been taken up from seven miles of the road, during the last summer, and replaced by the heavier rails above described.

The business of the Nashua and Lowell, and the Boston and Portland railroads, which is transacted in Boston, by passing over the Boston and Lowell road, is managed in a different manner from that of the Western, and Norwich and Worcester roads, which passes over the Boston and Worcester road. In the latter case, the two companies which form the line of transportation are regarded as copartners in the transportation, and the passengers and freight are taken indifferently, in the cars of either corporation, all which pass over both roads, each corporation furnishing its due proportion for the joint business; but each company owning and directing exclusively the locomotives on its own road, and each having the charge of freight and passengers, and the sale of tickets on its own road, and accounting to the other for that proportion of the receipts which belongs to it. There is consequently but one set of agents in Boston for the business of the three roads.

The Nashua and Boston and Portland railroads, on the contrary, have separate freight-houses, and also their own agents, in Boston, for the reception and delivery of freight, and the loading and unloading of cars, and use their own passenger cars exclusively for the conveyance of passengers, who are to be transported over any part of their own road, to or from any part of the Lowell road. We find, accordingly, in the returns of the Lowell railroad, distinct amounts returned, as received for passengers and freight on that road exclusively, and for like transportation in the cars of the other roads. The accounts of the Boston and Lowell corporation for the last year exhibit the following results :

The amount of capital stock paid in, is \$1,800,000. The whole amount expended on account of construction, to the 30th of November last, is \$1,834,893, of which amount, \$105,650 have been expended within the last year.

The current expenses of the last year amounted to \$119,469, of which \$33,193 are expended for repairs of roads and bridges, including \$14,638 for laying down the heavy rail on 7 miles of the road; \$22,644 for repairs of engines and cars; and \$63,632 for fuel, oil, salaries, wagons, loading merchandise, &c.

The receipts of income for the year amounted to \$267,541, viz. : from passengers conveyed in cars of the Lowell road, \$92,876; for freight in cars of the road, \$90,229; mail, rents, &c., \$1,897; passengers in cars of the Nashua road, \$34,507; freight in cars of the Nashua road, \$23,544; passengers in cars of the Boston and Maine road, \$18,570; freight in do., \$5,917.

Two semi-annual dividends have been declared and paid, each of 4 per cent., amounting to \$144,000.

This railroad has entered into a contract to furnish the Charlestown

Branch railroad, with a locomotive engine and tender, for hauling passengers or merchandise over that road for \$25 a day, including the services of enginemen and fireman, with fuel, water, and oil for the engine and tender. Every day on which the engine is required to run is to be reckoned as a full day, and the engine to run, if desired, 50 miles per day, or such distance as to average fifty per day. Should the average run exceed 50 miles per day, a further sum of 50 cents per mile is to be paid for the excess.

The *Nashua and Lowell* railroad has a capital paid in of \$380,000, and the same amount has been expended in the construction of the road, and for engines and other property. The earnings of the road in the year 1841, including the receipts for transport of passengers and merchandise in its cars over the Boston and Lowell road, amounted to \$132,497. Of this amount \$75,733 were received for passengers, and \$55,700 for freight, and \$55,900 were paid to the Boston and Lowell road, for transportation over the whole length of that road. The sum of \$1,861 was also paid to the Charlestown Branch railroad corporation and wharf company, for the use of their railroad and wharf. The cost of road repairs was \$2,762, and of repairs of engines and cars, \$8,263. There were two dividends of 4 per cent. each made the last year, amounting to \$30,400. On the completion of the Nashua and Concord railroad, by which this line will be extended to the capital of New Hampshire, the travel and transportation over the Nashua and Lowell road will be doubtless considerably increased.

The *Boston and Portland* railroad, which diverges from the Boston and Lowell road at Wilmington, at a distance of 15 miles from Boston, has been lengthened from station to station, at successive periods. It was opened to Newmarket in July last, and to its present termination in September. It has now reached the great manufacturing town of Dover, and it will soon be extended to the Great Falls in Somersworth, on the border of the state of Maine. The capital paid in is \$519,799, and the amount expended in the construction of the road, and on its appendages, \$553,280. The amount of its income during the last year was \$116,016; of which \$85,928 were received from passengers, and \$25,291 from freight. Of this sum \$25,139 were paid to the Boston and Lowell road, it being the amount which accrued to that corporation for the transport over that road.

The third line of railroads, leaving Boston in a southerly direction, consists of the *Boston and Providence* road, 41 miles in length, with a branch of two miles leading to Dedham, the *Taunton Branch* road, diverging from the Providence at Mansfield, 24 miles from Boston, 11 miles in length; the *New Bedford and Taunton* railroad, which

is an extension of the Taunton Branch, in nearly a right line, 20 miles in length. These three roads, which are immediately connected, and are traversed by the same cars, drawn, however, by locomotives belonging to their respective roads, have an extent of 72 miles, all within the state of Massachusetts. Near the termination of the Boston and Providence road, on the opposite side of the river, commences the New York and Boston railroad, leading from Providence to Stonington, 47 miles, and completing the line of communication by means of the Providence road, and a line of steamboats, between New York and Boston. This railroad, which is well built of a heavy T rail, at a cost of more than \$2,000,000, forms a very important adjunct to the Boston and Providence road, by rendering much more direct and expeditious the route to New York, and greatly increasing the travel over it. With the addition of this road, the southerly line from Boston has an extent of 121 miles.

The capital of the Boston and Providence railroad paid in is \$1,782,000. The receipts of income in the year 1841 amounted to \$230,821, of which \$152,015 were received from passengers, and \$75,108 for the transportation of merchandise. The expenses amounted to \$122,057, of which \$24,474 were for repairs of road, \$12,722 for repairs of engines and cars. Two dividends of 3 per cent. were paid, amounting to \$106,920. The number of miles run with locomotives was 107,638, of which 79,510 miles were run by passenger trains, and 28,128 by freight trains.

The *Taunton Branch* railroad has a capital paid in of \$250,000. The receipts of income in 1841 amounted to \$76,925, of which \$52,279 were received for the transportation of passengers, and \$22,442 for freight. The cars of this road run over the Boston and Providence road, from Mansfield to Boston, drawn by the engines of the latter road, and the agents of this corporation take the fare and freight for the whole. The amount payable to the Boston and Providence road, for the transportation of the passengers and freight to and from the Taunton Branch, was \$32,595. The cost of road repairs was \$1,878, and of repairs of engines and cars, \$2,253. Two dividends were paid, one of 3 1-2 and the other of 4 per cent. The number of miles run by passenger trains over the Taunton Branch was 13,787, by merchandise trains 6,886, and for clearing snow from the track, 143.

The *New Bedford and Taunton* railroad has a capital paid in of \$400,000. The receipts of income in 1841, amounted to \$52,513, of which \$39,469 were from passengers, and 8,180 for transportation of merchandise. The expenses during the year amounted to \$22,285, of which \$3,416 were for repairs of road, and \$3,654 for repairs of engines and cars. Two dividends were paid of 3 per cent.

each, amounting to \$24,000. The number of miles run by locomotive engines was 27,039, the greater part of which was with trains consisting of passenger and freight cars together. The amount of freight transported on the road has increased considerably during the last year.

The fourth line of railroads leading from Boston, is that which begins at East Boston, and runs in a northeasterly direction to the state of Maine. This line consists of the *Eastern* railroad, in Massachusetts, which is 38 miles in length, exclusive of the Marblehead Branch, which is 3 miles; the *Eastern* railroad in New Hampshire, which is 15 1-2 miles, extending from the line of Massachusetts to Portsmouth; and the *Portsmouth and Portland* railroad, in Maine, extending from the termination of the New Hampshire section of the Eastern railroad, at Portsmouth, to Portland, a distance of 48 miles. The two first portions of this line, 56 1-2 miles in length, including the Marblehead Branch, are completed, and have been in operation during the last year; the other portion has been recently opened for 14 miles, from Portland to a point near Saco, and the residue is yet under the hands of the contractors, and will be finished in the course of the ensuing summer. The length of the line, when completed, from Boston to Portland, will be 101 miles.

The *Eastern* railroad, in Massachusetts, has a capital paid in, of \$1,600,000, with a loan on State scrip of \$500,000, making \$2,100,000. The cost of the road, and all other property, (including property not required for the use of the road, and intended to be sold, valued at \$162,213,) to the 31st of December last, was \$2,289,285. The cost of the 15 1-2 miles of road in New Hampshire, was \$350,000. This road belongs to an independent corporation, established under a charter from the legislature of New Hampshire; but the road and all its franchises are leased for a long term of years to the Massachusetts company, with the exclusive right of managing it, in connexion with their own road, and of receiving the whole income, on condition of keeping it in repair, and of paying to the stockholders the same dividends of profits, as are paid to the stockholders of their own company. In the above statement of cost of the Massachusetts road, are included the engines and *materiel* required for the operations on the whole line. The cost of the line, therefore, from Boston to Portsmouth, a distance of 53 1-2 miles, with its appurtenances, is \$2,639,285.

The exact length of the *Eastern* railroad, from the ferry at East Boston to the Massachusetts line, is 38 miles and 1063 feet. In passing over the undulating surface of ground, it is graded in 84 planes, 26 of which, measuring 12 miles 3,210 feet, are level, and the 58

others have different rates of inclination, varying from 7 feet to 40 feet per mile. One plane only, 1,600 feet in length, is of so high a grade as 40 feet per mile; 5, measuring 3 miles 2,110 feet, are of 33 and 35 feet grade, and no others exceed 30 feet in a mile. There is no long continued succession of ascending planes, so that no part of the road rises to a great elevation. There is very little objectionable curvature on the road. The shortest curves, and those are of limited extent, are on a radius of 2,865 feet, and nearly 29 miles of it are straight. The chief part of the road is built with a single track, and is 21 feet in width. The form of construction differs in some respects from that of any other railroad, and is thus described in the report of the directors: "There are undersills of 4-inch hemlock plank, 11 inches wide, resting at the joints on pieces of 2-inch plank, 4 feet long. Sleepers are placed transversely on the undersills, 3 feet apart, on each of which is fixed an elevated chair for each rail, which is thereby supported and secured by keys. The rail weighs 46 1-2 lbs. per yard. The sleepers are entirely covered by gravel." The chief difference in the form of construction between it and some other railroads, is in the greater elevation and size of the chairs, which admit of the sleepers being entirely covered with gravel, and a space being yet left between the rail and the bed of the road, for the free passage of water, and the more easily keeping the track clear of snow. Between Salem and Lynn, a distance of five miles, a double track is laid.

On the Marblehead branch the grades vary from 15 to 40 feet per mile, and there are several curves varying from 800 to 1,700 feet radius. The rails are formed of sleepers of yellow pine, with an iron plate 2 1-2 inches wide, and 5-8ths of an inch thick.

The number of passengers transported in 1841, on the main road, was 452,966, the receipts from which amounted to \$253,352; and on the Marblehead Branch the number of passengers was 35,060, producing the sum of \$4,382. The average receipt from each passenger on the main road was about 56 cents, and on the Marblehead Branch, 12 1-2 cents. The number of miles run during the year on the main road, with passengers, was 137,388, and on the Branch, 16,811. The distance run by freight trains was 14,376, and by gravel trains, 22,634.

The amount of receipts during the year was \$299,574, of which \$257,735 were derived from passengers, \$12,256 from freight, \$12,415 from hauling of gravel, \$9,521 for conveying mail, and \$7,647 from rents and interest.

The expenditures, exclusive of dividends and interest on the State loan, amounted to \$154,957, of which \$27,553 were for road re-

pairs, \$17,821 for repair of engines and cars, and \$11,638 for East Boston ferry. The interest on the State loan amounted to \$25,000, and a dividend of 6 per cent. was paid to the stockholders in both the Massachusetts and New Hampshire corporations.

Of the Portsmouth and Portland road little is to be said at present, except that the work is under contract along the whole line, and due diligence is used to complete it with as little delay as possible. It is to be of a form of construction similar to that of the Western road, with a heavy T rail. It is to be united with the Eastern railroad at Portsmouth, by means of a bridge over the Piscataqua River, to be erected on piles, with a track for common carriages beneath the railway track. Fourteen miles of the road, at the eastern extremity, are already opened and in daily use. The finished portion would have been extended from Portland to Saco, but for a remarkable sinking of an embankment, 50 feet in height, with a culvert, at the crossing of a creek called Goose Fair Brook. The meadow through which this brook flows, and across which it is attempted to carry the embankment, covers a bed of blue clay, which is very soft and almost fluid, and of great depth. The meadow, however, is not of great width, and the obstacle will, doubtless, be surmounted without serious difficulty.

Some of the principal facts relating to the Massachusetts railroads are recapitulated in the following tables. The first column of figures in the first table shows the amount of capital paid in, together with the amount of State loan which has been granted to three of the corporations. The two columns of lengths of roads, show what part of the respective roads is within, and what part out of the state of Massachusetts. The last column but one in that table shows the number of miles run by trains of cars drawn by locomotives in the year 1841; and the last column the number of miles with passenger cars exclusively.

	Capital paid and State Loan.	Amount Expended.	L'gth in Mass.	L'gth out of Mass.	Total.	Miles run in 1841 with Passengers.
Boston and Lowell,	1,800,000	1,834,893	26		125,296	67,192
Boston and Worcester,	2,300,000	2,324,448	45		165,217	97,232
Boston and Providence,	1,782,000	1,798,397	41		107,638	79,510
East in Mass. & N. H.,	2,450,000	2,639,285	38	15½	191,209	
Taunton Branch,	250,000	250,000	11		20,816	13,787
N. Bedford & Taunton,	400,600	422,758	20		27,039	
Nashua and Lowell,	380,000	380,000	7½	7	43,510	32,790
Norwich & Worcester,	2,000,000	2,157,037	19½	39½		
Boston and Portland,	519,799	553,290	20	32	99,088	74,316
Western, & A. & W. S.,	6,744,995	6,057,997	117	38	160,106	
Total,	18,625,794	18,418,107	344½	132		

Receipts in 1841.

	From Passengers.	From Freight.	Mail and Miscell.	Total.
Boston and Lowell,	145,953	119,691	1,097	267,541
Boston and Worcester,	190,097	110,001	10,709	310,808
Boston and Providence,	152,015	71,011	7,794	230,821
Eastern,	257,735	12,256	29,582	299,574
Taunton Branch,	52,279	22,442	2,204	* 44,330
New Bedford and Taunton,	39,469	8,181	4,863	52,513
Nashua and Lowell,	75,733	55,700	1,064	* 76,597
Norwich and Worcester,	99,332	52,594	3,334	155,261
Boston and Portland,	85,928	25,291	4,797	* 90,877
Western, and Alb. & W. S.,	113,842	64,467	4,000	182,309
	1,212,383	541,634	69,445	1,710,631

* These returns do not embrace the sums paid to the Lowell and Providence railroads, as they are embraced in the returns for those roads. The corresponding items, however, under the columns of receipts for passengers and freight, embrace the amounts paid to those roads, and these items are accordingly included twice within those columns.

*Expenses in 1841.**Dividends in 1841.*

	Repairs of Road.	Rep. Eng's. and Cars.	Total Expenses.	Rate.	Amount.
Boston and Lowell,	33,193	22,644	119,469	8 per ct.	144,000
Boston and Worcester,	31,811	25,286	162,998	7 " "	152,000
Boston and Providence,	24,474	12,722	122,057	6 " "	106,920
Eastern,	27,553	17,821	154,958	6 " "	135,166
Taunton Branch,	1,879	2,253	22,448	7½ " "	18,750
New Bedford and Taunton,	3,416	3,654	22,285	6 " "	24,000
Nashua and Lowell,	2,762	8,263	38,205	8 " "	30,400
Norwich and Worcester,	6,332	7,722	78,805		32,000
Boston and Portland,	8,023	5,304	41,882	4½ " "	23,422
Western,	20,208	16,979	104,806		
Total,	159,651	130,370	867,913		

From the foregoing table it will be perceived that the average cost of all the railroads, including the portions of them extending out of the State, with their depot stations, engines, cars, and other property, have cost an amount nearly equal to an average of \$40,000 per mile. It will be observed, also, that the railroads which lead directly from Boston already afford a net income of from 6 to 8 per cent.

ARTICLE III.

RAILROADS IN FRANCE.

THE French Government has again resolved on recommending to the Legislative Chambers the adoption of measures for establishing, at the national expense, several great lines of railway, leading from Paris, by way of the chief commercial and manufacturing towns, to the frontiers of the kingdom. Projects of this nature have been much discussed in France for many years, and several schemes for railroads, on some of the principal lines of communication, to be established by private enterprise, with aid from the government, after having been partially matured, have been abandoned, without coming to any useful result. There is, therefore, no grand line of railway, bearing any comparison with the principal works in England, or even in this country, yet completed in France. The railway from Paris to Rouen, undertaken by a company of French and English capitalists, will be of this character, but it is yet unfinished. There are several other works of considerable magnitude, and of great cost; but they are either of limited extent, being confined to the immediate vicinity of Paris, or they are upon routes comparatively unimportant, and which do not command any great portion of the public travel, such as that from St. Entienne to Lyons, and that from Strasburgh to Bale.

As early as the year 1833, the French government appropriated 500,000 francs to defray the expense of surveys and estimates of works on the most important lines of communication, and in the course of two years, five lines had been sufficiently explored and surveyed to be pronounced practicable, and capable of realizing the benefits of this rapid mode of communication. These lines were those which lead from Paris to Lille, to Havre, to Strasburgh, to Lyons, and to Bordeaux. The difficulty and cost of the undertaking deterred the government from proceeding further at that time.

In 1837, the government again turned their attention to the subject, and proposed to the Chambers a project, by which encouragement should be offered, by the advance of specific sums of money, for the construction of six distinct lines of railway, to be undertaken by companies, under grants for periods of years, reserving to the government the right of purchasing the works, by indemnifying the stockholders on certain principles to be established, and also the right of revising the rates of fare at certain periods. Among these lines were those from Paris to Rouen, from Paris to Orleans, and from Paris to the frontiers of Belgium. This project was submitted to the

Chamber of Deputies, but after discussion it was rejected. All that was granted was the privilege, by private companies, to undertake the works exclusively at their own risk, and in regard to the principal lines, this grant of authority led to no result.

In the following year the government again brought the subject to the attention of the Chamber of Deputies. They submitted a project of a law for the establishment of a system of railways consisting of nine principal lines, seven of them leading from Paris, viz., to the Belgian frontier, to Havre, to Nantes, to Bayonne, to Strasburgh through the central regions of France, to Strasburgh by Nancy, and to Marseilles by Lyons; and in addition to these, one from Marseilles by way of Toulouse to Bordeaux, and one from Marseilles to Bale, by way of Lyons and Besançon. This stupendous project proposed an extent of railway equal to 2,750 miles in length, at a cost of 1,000,000,000 of francs. It was not, however, proposed to undertake the whole project at once, but to limit the present efforts to the route from Paris to Belgium, Paris to Rouen, Paris to Bordeaux, by way of Orleans and Tours, and from Marseilles to Avignon. This project was submitted to a committee, of which M. Arago was the reporter. He went into an examination of the subject, and presented reasons why the project should not be adopted. He argued that these works should not be undertaken by the state, but should be abandoned to the enterprise of private companies, and concluded by recommending that the project should be rejected. The Minister of Public Works, M. Martin du Noid, maintained the opinion that the government ought to undertake exclusively the great lines of communication, and leave the secondary lines to private enterprise. After a long discussion, into which a number of members of the Chamber entered, the project was rejected, by 196 black balls to 69 white.

The most important railroad, undertaken at an early period in France, was that from St. Etienne to Lyons, designed chiefly for the transport of the coal, and the heavy manufactures of that region. This enterprise proved unsuccessful, partly from the difficulties of the route, and partly from the want of skill in the construction, and also in part from the insufficient rates of fare established by law, for the transport both of passengers and of merchandise.

The favorite projects of speculators in stocks were of railroads leading from Paris to the neighboring towns. One was authorized to be constructed from Paris to St. Germain. Two grants were also obtained by rival parties for a railroad from Paris to Versailles, one by the right, and the other by the left bank of the Seine. Attempts were made to compromise the claims of the parties, by uniting them in favor of one project, and abandoning the other, but the prospects

of immense profits from these projects were so captivating, that neither party could be induced to yield, or to divide their interest in their respective enterprises, and it was resolved to proceed with them both. They, however, both proved to be much more expensive than had been anticipated, so that both capitals would have been insufficient for the completion of one road, and the stocks of both were much depressed.

The railroad of St. Germain was first opened on the 26th of August, 1837. This ceremony took place in presence of an immense concourse of the population, who were attracted by the novelty of the scene. The locomotives, with carriages and wagons, traversed the road industriously through the day, conveying gratuitously as many persons as the carriages would contain. It was computed that 10,000 persons on that day made the excursion from Paris to St. Germain. The passage was made in about 30 minutes.

The length of this railroad is 18,430 metres, or about 11 1-2 English miles. On more than two thirds of the line, the road is upon an embankment of 15 to 20 feet in height. It passes through two tunnels, crosses the Seine twice on three bridges, and crosses fifteen common roads, in every instance passing either above or below their level. The tunnel of Paris, near the commencement of the road, is 193 metres in length, 16 metres or 49 feet in depth, 13 1-3 metres in width, and has four tracks. It was begun in May, 1836, and finished in February following. The tunnel of Batignolles is 138 metres in length. It was begun in June 1836, and finished in the following March.

About two years afterwards a branch of this railway, at the expense however of an independent company, was completed to Versailles, and six or eight months later still, another branch was opened to St. Cloud. Very low rates of fare were established upon these railroads, and the number of travellers was immense. From an official report, which was made upon the operations of these roads to the 31st of July, 1840, when the line to St. Germain had been open two years and eleven months, that to Versailles ten months, and that to St. Cloud two and a half months, it appears that the number of passengers which had been carried was as follows :

On the St. Germain road,	3,716,416 passengers.
On the Versailles, "	1,079,202 "
On the St. Cloud, "	119,541 "

In the month of August, 1840, the whole number of passengers on the three branches of the road was 361,910, and the amount of receipts 391,974 francs, making an average of 11,624 daily.

On the 10th of September, 1840, was opened the railway from

Paris to Versailles, on the left of the Seine. About a thousand persons, among whom were many public officers, were carried over the line in four trains, which made the passage to Versailles in an average period of 28 minutes, and the return passage in 22. A part of the country through which this route passes, the plain of the Issy, and particularly near the Lower Meudon, where the numerous windings of the Seine open to view, and at the valley and viaduct of the Fleury, is highly picturesque and beautiful. The number of passengers on this road, in the three first weeks from its opening, was 69,732, and the receipts 83,471 francs. On the opening of this road, there was a considerable falling off in the number of those by the road of the right bank. The whole number to St. Germain and Versailles in September by this road, was 266,909, and the receipts 282,254, compared with 295,215 received in the same month of the preceding year. In August, 1841, the passengers on both roads of the right bank were 326,439, and the receipts 377,219 francs; by the road of the left bank, passengers 147,000, and receipts 175,447. The number of passengers in these statements includes those who stop or are taken up at the way stations, the number of which is comparatively small. It will be perceived, from the proportion of receipts to the number of passengers, that the fare is very low. The average receipt from each passenger from Paris to St. Germain, is about 21 cents of our money, or a fraction short of two cents a mile. The average receipt from each passenger to Versailles, by both roads, is about the same.

The cost of these roads far exceeded the original computation. That by the right bank, with the advantage of the previous construction of the road to St. Germain, with which it unites at the village of Asnieres, cost the immense sum of 14,000,000 of francs, the original estimate having been only 4,000,000. A part of this extravagant cost was occasioned by the natural obstacles of the route, which required costly tunnels, that of the Park of St. Cloud being 1,600 feet in length, and high embankments, and a part, by some of the very useless exactions of the law, requiring a uniform grade, and a rigid adherence to a straight line, when a slight deviation might have effected a great saving of expense. The road by the left bank began also with a capital of 4,000,000 of francs. When this was expended, another 4,000,000 were added, and again 2,000,000 more. When these 10,000,000 were expended, the work, which was far from being finished, came to a stand, and the shares, which had cost 1,000 francs, fell to 150. An application was made to the Chamber of Deputies to aid, with little hope of success; but the application was favorably received. A loan of 5,000,000 francs was granted, and the company was relieved from some onerous obligations, one of which

was to extend the route from the barrier of the Maine to the street of Assas, in Paris. This relief enabled the company to go on and complete the work, and they are now both in operation as above stated.

At a meeting of the proprietors of the Versailles railroad of the right branch, for the purpose of authorizing a loan for the increase of the *matériel* for the working of the road, a statement was made of the cost, together with that of the increased *matériel* then prepared. The aggregate amount was 14,909,308 francs. Of this sum, the amount expended for the Versailles road, including the St. Cloud branch, after deducting the value of disposable property not required for the purpose of the road, was 11,324,123 francs ; for interest, &c., 394,000 francs ; and for the proportion of the *matériel* of transport, and the machine-shop belonging to this road, \$3,191,177 francs. This was independent of the capital of the St. Germain road, which furnishes the track for both roads, so far as they unite. The two roads are operated in conjunction. The materiel of the two united, the cost of which amounted to 4,742,766 francs, includes 51 locomotive engines, as many tenders, and 205 diligences and wagons for passengers, besides baggage and freight wagons.

Notwithstanding the vast number of passengers on these three railroads, the number did not equal the expectation of speculators in the stocks, and the cost of working the roads was greater, from the excessively low rates of fare, to which the companies are restricted by the conditions of their charters, and from which improvident condition the companies have in vain endeavored to get relieved. The profit affords a very inadequate compensation for the capital invested. The shares, for a long period before, as well as after the opening, were at a great discount from the par value, and subject to great fluctuations, in proportion as the prospect was encouraging of relief by an increase of the rates of fare. In the beginning of July, 1839, a month before the opening of the Versailles road of the right bank, the shares of the St. Germain road commanded 625 *a* 650 francs for shares of 1,000 francs. The Versailles of the right bank brought 650 *a* 675 ; the Versailles of the left bank, the works of which were then discontinued for the want of funds, after the expenditure of 12,000,000 francs, were selling at 142 1-2 *a* 145 francs. On the passing of the law, authorizing the loan of 5,000,000 francs to the last named road, the shares rose at once to 365 *a* 375 francs, but they soon after began to decline. When the prospect abated of relief by an increase of the fares, the shares of the three roads declined rapidly. In the course of the week ending September 16, the St. Germain shares fell from 590 to 532 1-2 ; the Versailles of the right bank from 565 to 530 ; and the left bank from 325 to 275. From that date to the present,

the shares of the three roads have been subject to great fluctuations ; and on the 12th of December last, those of the St. Germain road were quoted on the Paris Exchange at 745 *a* 755 ; those of the Versailles of the right bank at 312 1-2 *a* 317 1-2 ; and those of the left bank at 197 1-2.

The unfavorable result of these three works had tended greatly to discourage similar enterprises in France. Several others have been undertaken in different parts of France, without much greater success. Among these are the Paris and Orleans railroad, which has been opened only to Corbeil, a distance of about 20 miles, and there suspended. The railroad from Strasburgh to Bale, a distance of 87 miles, along the course of the Rhine, was prosecuted under many discouragements, and at last completed, through the energy of some of its principal proprietors. Its shares are greatly depressed. The railroad from St. Etienne to Lyons, the first constructed in France, has been a work of great utility, but ruinous to the proprietors, from the low rate of tolls. There are several minor roads, among which are one from Montpellier to Cette, one from Nismes to Alais, and one from Bordeaux to Teste. There is also one of greater magnitude, in which English capitalists and English engineers are associated with those of France, the work of which is now going on with activity, from Paris to Rouen.

In these various enterprises, independently of the last named, the capitalists of Paris have invested near 150,000,000 francs, all of which is expended in works which afford a very inadequate income, and the shares of which are consequently selling much below par. Notwithstanding these discouragements, a very strong desire has been manifested by the people of France to undertake a system of railroads of a national character, which shall facilitate the communications throughout the country, and give a spur to the national industry. They seem impatient at remaining so far behind their neighbors on the opposite side of the Channel, as well as in Belgium and Germany, in improvements of this character. They perceive, also, that without some effort to keep pace with their neighbors in their means of communication, they are in danger of being cut off from a portion of the advantages of their position. The railroads of Belgium, by opening a channel of communication between England and Germany, so much more direct and rapid than that through France, or even to the heart of France, have produced a sensible change in the course of trade. In passing from England to Switzerland, there is no temptation to take the route through France, since that by way of Ostend, the Belgian railroad, and the Rhine, is so much easier and more rapid. The different projects for works of a national character, traversing the whole kingdom, have therefore never been lost sight of, but have been

brought forward in various forms. These are on the lines before mentioned, leading in different directions from Paris to the frontier.

The western route, from Paris to Havre, is already in a successful train for being early completed, by the company who have now in hand the road from Paris to Rouen. This company, though not pledged to carry their work further than to Rouen, will probably extend it to Havre, as it will otherwise be incomplete. The navigation of the Seine by steamboats, which is relied on for the residue of the line, is so liable to interruptions, and is so circuitous by the windings of the river, that it will probably be found for the interest of the company to complete the road from Paris to Havre.

The route next in order, and which is regarded as of great importance, is the northern, which shall unite Paris with Belgium and the Belgian railroads, at Valenciennes and Lille, and with Calais, the nearest port to the coast of England. Several routes to Calais have been considered, but that by way of Lille, and thence in a direction towards Dunkirk as well as Calais, seems to be preferred, on account of the importance of the former of these ports as a place of commerce, which is at present sacrificed to the superior advantages of Ostend and Antwerp. To satisfy these several objects, a line of road, 250 miles in length, will be required. Calais, on account of the shortness of the passage between it and Dover, which is accomplished in the space of two and a half hours, it is thought will possess a decided advantage over every other for commanding the travel between England and the Continent, provided it can be made to possess equal facilities of access to the interior. This consideration makes it an important object with the French government to establish a railroad, in as direct a line as possible, between it and Paris, in the expectation that it will thus become the preferred route between Paris and London. With such a railroad, when the London and Southeastern railroad, which is now advanced, shall be completed, terminating at Dover, the journey between the two capitals will be performed in the compass of a single day.

The next route, and one which is more important than any other, is that from Paris to Lyons and Marseilles, a distance of 550 miles. For the present, however, it is proposed to rely upon the navigation of the Rhone and the Saone by steamers, for a part of this line of communication, and to limit the railroads to a line from Paris, by the province of Burgundy, to the Saone, and a shorter line from Beaucuire, or Avignon, on the Rhone, to Marseilles. This reduces the length of railway on this line to a little over 300 miles. It is ascertained that the mountain ridge which divides the waters of the Seine and the Atlantic from those of the Rhone and the Mediterranean, may be surmounted on this route by a gradual inclination, not ex-

ceeding four metres in a thousand, or 21 feet in a mile, in any part from Paris to the summit. The line branches from that of Orleans at Corbeil, and following the valleys of the Seine, the Youne, the Armancon, and the Ouche, it reaches a natural gap in the mountain, which seems designed by nature to favor the route, and to dispense with the necessity of a tunnel. From this opening, the descent is gradual to Dijon and Chalons, where it meets the navigable part of the Saone, and unites with the steamboat lines to Lyons and Avignon. It is stated that more than 220,000 passengers now traverse the route annually between Lyons and Paris, and that the steamboats bring daily to Chalons from 1,000 to 1,200 passengers. The line from Avignon and Beaucaire to Marseilles, 60 or 70 miles in length, presents no serious obstacles.

Another important route, and one which will greatly increase the value of the foregoing, is a diverging line from Dijon to Mulhausen, where it would connect with the railroad of Strasburgh and Bale, and with the great lines of communication on the Rhine and in Germany. Paris would thus be connected with the Rhine, Switzerland, and Germany, by means of the great route to the Mediterranean, diverging therefrom at Dijon, and a direct channel would be opened through France, from the Rhine and the north of Europe, to the Mediterranean. It is only necessary to look at the map, to perceive the value of these routes, if they can but be established and operated with the efficiency and certainty of the English and American railroads. Money is all that is necessary to accomplish this ; and, although the amount required is immense, the French government and people seem determined not to withhold it. The distance from Dijon to Mulhausen, on the Bale and Strasburgh railroad, is about 125 miles.

The line next in importance is that from Paris, by way of Tours, Bordeaux, and Bayonne, to the frontier of Spain, with a branch to Nantes. In addition to these, are many which interest chiefly particular cities or localities, and which cannot be advantageously embraced in any national system.

It would be difficult for one not accustomed to peruse the daily French journals, to imagine to what extent these systems of internal improvement have engrossed the public attention, for some years past. Questions of the preference to be given to particular schemes and routes, have been discussed with an earnestness proportioned to their importance, in their bearing upon particular local interests. The future prosperity of rich cities and communities depends, in a great degree, in many cases, on the contingency of their being embraced within these great lines of communication, or excluded from them to the benefit of some more fortunately situated rival city. The trading and manufacturing portions of the country, also, appear to be deeply

impressed, with the benefit which will result to the national industry, from the stimulus which will be given to it by facilities of intercourse which these works will afford.

The latest accounts from France state, that the Minister of Public Works, with the approbation of the government, was about to lay before the Chambers a new project of a law for a great system of railways. He proposes to proceed upon a different plan from either of those heretofore recommended. Taking advantage of the strong local interest felt in the most productive portions of the country, in favor of these improvements, he proposes a mixed system, by which part of the expense shall be borne by the national treasury, and the rest by *localities*; that is, by departments, cities, communes, and individuals. Branches will be reserved to private companies, to be assisted by the public, according to a system to be hereafter devised. The localities interested will be required to furnish the value of all the lands necessary for the roads; the state will execute the embankments, excavations, works of art, bridges, stations, &c.; and the localities will be required to lay down the rails, and prepare the road for use. It is computed that this plan will divide the expense nearly into two equal parts.

The report of the Minister admits the dilatoriness of France in the execution of these great enterprises. "Belgium," it says, "has 82 leagues of railroad executed and open, out of 140 leagues projected; England has 1,398 miles out of 2,187 projected; Germany has 180 leagues out of 1,800; whilst France, out of 540 leagues of railway necessary, has but a few leagues, not worth noting."

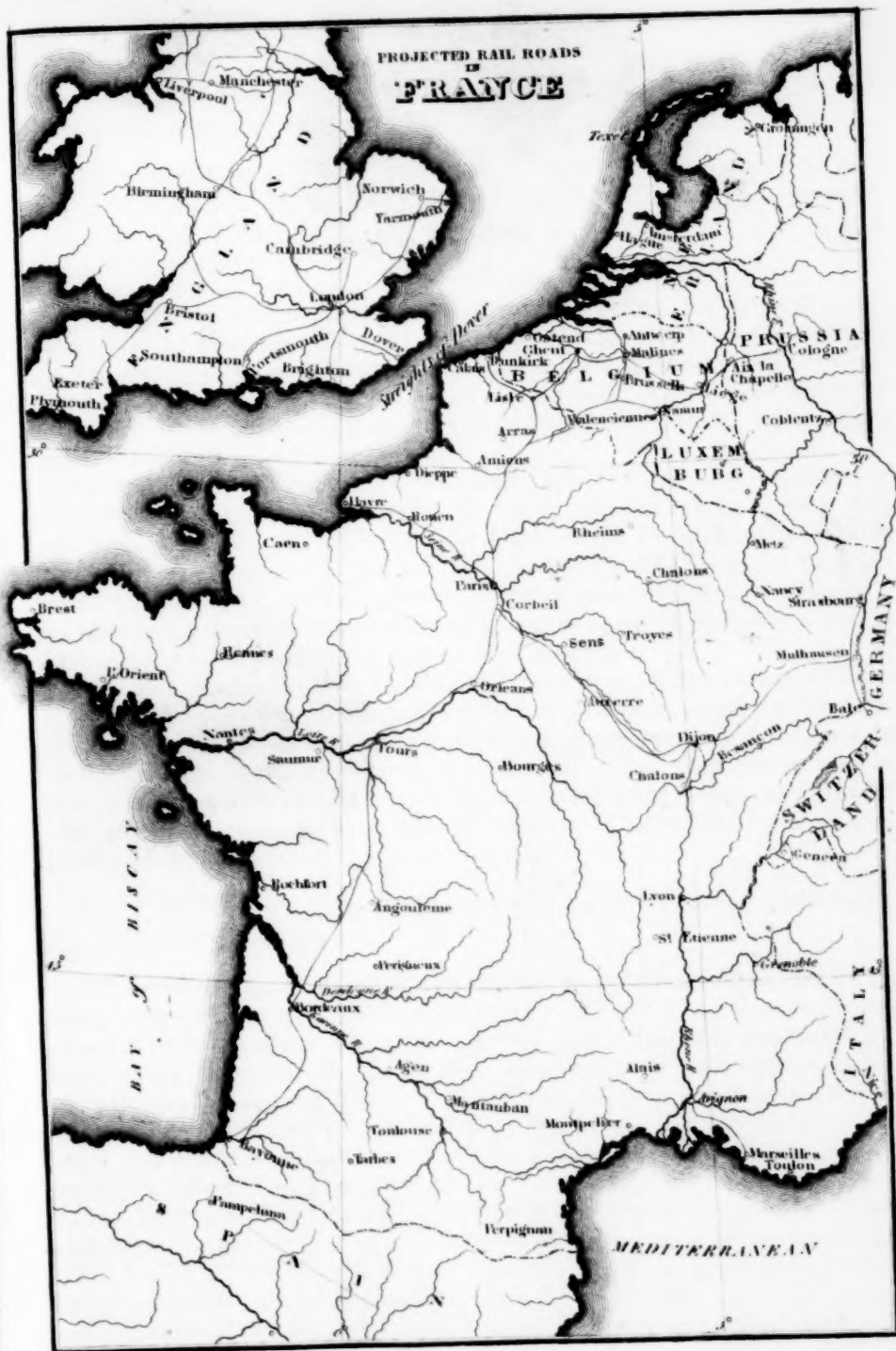
After describing the great lines which must enter into the system to be ultimately executed, the Minister proceeds to state the portion of it which it is proposed to undertake at the present time, as follows:

"The Anglo-Belgian line comes first. The surveys and studies for it can be finished before the end of 1842, as they are already completed as far as Creil. It is the most important in a political and commercial sense, and therefore ought to be the first railroad undertaken.

"The line from Paris to Marseilles is surveyed merely from Paris by Dijon, to Chalons-sur-Saone, and from Marseilles to the Rhone. Until the resources of the treasury permit the execution of the whole line, these portions of it may be first executed; they, moreover, being connected together by the steamers which navigate the Rhone and Saone. The difficulty of finding a sufficient number of skilful engineers is also a reason for not commencing five great lines at once.

"Government, therefore, confines its demands to credits for the following lines: 1. For the Anglo-Belgian line. 2. For the line between Marseilles and the Rhone. 3. For the line from Paris to Chalons-sur-Saone, by Dijon. A million of francs, over and above, will be demand-

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ed in order to complete, before the end of 1843, the surveys of the three other lines."

The apprehension which is felt in France of the effects of the Belgian railroads is shown from the following extracts from a leading Paris journal. The following statement is quoted from one of the journals of Belgium :

" The commissioner charged with proposing means for extending the operations of the railroad, appears to concur with the Minister of Public Works as to the establishment of three national steamboats between Ostend and Dover. These steamers will be specially charged with the transport of despatches, passengers, and freight to Ostend, on the days when the English boats do not run.

" If the Chambers, as we do not doubt, allow the credits required for this improvement, it will immediately produce a certain increase in the railroad receipts, and will facilitate the mail communication with England ; the mails will, necessarily, pass every day ; for the English post-office, which does not intrust its despatches to foreign steamers, will be compelled to establish mutual exchanges, by sending a vessel from Dover to Ostend every day except Mondays.

" In this way, the correspondence from the west for a part of Germany, will pass through Belgium, where it will gain considerable time over the present means of communication, since between London and its destination, it will be conveyed by means of railroads, excepting in the passage of the Channel and the space between Liege and Aix-la-Chapelle, [which is in progress of execution] ; for the London and Dover railroad will now soon be opened."

Upon the foregoing paragraphs the Paris Journal des Debats makes the following comment :

" This news, the truth of which cannot be doubted, shows the injury which the Belgian railroads may inflict on France, if we do not hasten to build ours. Calais, being the part of the Continent nearest England, every thing which passes from England to the Continent should pass through Calais, and *vice versa*. The nearly finished railroad from London to Dover favors this natural tendency. But the Belgian railroad now extends from Ostend only to Liege ; it will in a few months be opened from Liege to Cologne. Even now, in spite of the gap which exists between Liege and Aix-la-Chapelle, Ostend supplants Calais, although the passage by sea from Dover to Ostend is three times that from Dover to the French port. Thus we shall lose the existing travel between England and Germany. We are told, that even the Italian silks, intended for England, which have hitherto gone through Lyons to Calais, begin to be carried by the Rhine, Cologne, and Ostend. It is, therefore, absolutely necessary, that the Calais road, the great importance of which none doubts, should be included in the bill which will be presented in the course of a few weeks."

We here close the present article ; but we shall take an early opportunity to present some further facts in relation to the railroads of France, and also to state the course which may be adopted upon the present recommendation to the Legislative Chambers.

To enable the reader to comprehend more readily the character and extent of the system of improvement meditated by the French Government, and its effect upon the intercourse of Paris with the remote parts of the kingdom, as well as upon that of France with the neighboring countries, we subjoin a map upon a small scale, which exhibits all these lines of communication at a single view. This map shows, also, how effectually the route through Belgium is likely to supersede the transit through France, for valuable goods as well as for travellers from Germany and Switzerland, to ports on the British Channel. By the aid of this map, the reader will be able to trace the several routes, upon any larger map of France or Europe.

In the report of the French Minister of Public Works, above quoted, there is an allusion to the railroads in Germany. A late European journal gives a statement of the extent of the German railways, on the authority of an article published in the Prussian State Gazette. This statement divides all the lines of railway into the following classes :

Miles finished,	175 1-3	which have cost	\$28,940,000
Miles in course of construction,	166 1-3	which will cost	43,357,000
Miles determined on,	124 1-4	estimated at	27,240,000
Miles projected,	363	proximate estimate,	30,586,000
Miles, lines of junction,	193	proximate estimate,	42,846,000
<hr/>			
Total number of miles,	1,022	Cost,	\$172,969,000

The Leipzig Gazette announces that the Austrian Government has decided on authorizing the construction of a railway between Vienna and Dresden, by the valley of the Elbe. It is expected that all possible favor will be conceded to the plan, and that there will even be the guaranty of an interest of 4 per cent.

To enable the reader to derive any precise information from the above statement, it may be necessary to add, that the miles are Prussian miles, each of which is equal to four and two thirds English miles, and the dollars are equal to 66 cents each, in American currency. The length of all the railroads finished and projected is, therefore, equal to 4,757 English miles, and the estimated cost of the whole \$114,159,000, or an average of \$24,000 a mile, American currency.

M I S C E L L A N Y .

LORENZO STARK :

OR, A GERMAN MERCHANT OF THE OLD SCHOOL.

[Translated from the German. — Continued from Vol. III. page 32.]

CHAPTER XXXI.

It was painful to Madam Harvest, that the widow could find no end to her praises of the generosity of her father, and her own friendship ; but, much as she endeavored to turn the conversaiion, it always came back to the same point.

"I should have liked," said the Doctor's lady, at last, "to have spoken to you of my brother ; but I see ——"

At that moment the mouth of the widow closed, but her ears were only the more open.

"You cannot, perhaps, imagine, that behind the apparent cheerfulness, with which I came to visit you, I was hiding a very bitter sorrow. It is, however, the case. I have cause of regret on my brother's account — bitter regret."

"Impossible ; for such a brother ?"

"Yes, for such a one, just because he is such a one."

"My dear Madam Harvest" — she was perceptibly disturbed.

"I cannot help myself: I carry my heart on my tongue. You see, my friend, nothing in the world troubles me so much as not to have my kind feelings returned. If my frankness is rewarded by reserve, my hearty confidence with cold distrust — say what you will, this is vexatious, it is horrible."

"Would I defend it? But your worthy brother ——"

"Oh, I see ; you will not let me blame him. You are too heartily his friend."

"If I were not" — she had tears in her eyes.

"You are, however, my friend, and you will be just. I will bring forward the worst, which, however, is still a matter of uncertainty. My brother has some affair at heart, which does not do him honor. Does he not know his sister, his loving sister, who would do any thing in the world, rather than betray him? Does he not know his honest brother-in-law, who takes such a strong interest in his affairs, and who would be so willing to assist him by word or deed? Why does he remain silent when a thousand questions are asked him, and he is a thousand times besought to reveal his trouble?"

"Shall I ask what it is?"

"There is very little to hear. I alas only know, can only guess in general, that he is in love!"

"He — in love?" asked the widow, not without hesitation, for at that moment she saw before her the worthy, noble friend, who in taking leave of her, kissed her hand with so much feeling, that her heart told her, he was in love.

"He has all the marks of it," resumed Madam Harvest; "incessant sighing, a blank gazing upon one spot, a feeble, melancholy tone, a moist, languishing eye. But who can he be in love with? who? No prayers, no question can bring this out. It cannot be any person who is no longer disengaged, whose heart is already disposed of?"

"Oh, certainly not, certainly not," said the widow, who, by this rash speech, which hastily escaped her, was thrown into an embarrassment, a confusion.

"You know, then, perhaps?"

"Nothing, my dear friend, I know nothing of it; I only judge from his manner of thinking, his character, that if he paid such attention —"

"Well, I will not guess any longer; for that he loves a person, who is in any way improper for him, who is unworthy of him — no, that I cannot, will not guess."

"I pray you do not entertain such a thought." She could scarcely restrain her tears, for possible as it might be that she was that person, she found it difficult to put herself in that place.

"Let me go on frankly — I have some reason for applying to you. During the whole time my brother was arranging your books I scarcely saw him. He was here every evening with you. Naturally he would have confided in you —"

The widow trembled at what might be coming. She turned first red, then pale.

"Perhaps, in so many conversations, — in so many unrestrained, confidential conversations, — when you were, for the most part, alone with him —"

"Truly; but then —"

"Could not something have betrayed? some little word might have fallen, that might give us some light?"

"I do not know, I must reflect," said the widow; "yet in general —"

"In general what, my dear friend?"

"He was full of work; he was engaged in figuring. He talked very little."

"Reckoning, to be sure, takes up one's attention; but still, the beginning of his passion was exactly at the time when he was examining your accounts, for before that he was gay and cheerful. He certainly must have been thinking of something beside numbers and fractions. Cannot you remember whether you had company? whether any ladies were here?"

"I had — no company." She could think of nothing more. She was restless, and pulled her dress.

"Well, I shall learn nothing here ; but must go away as wise as I came. It must be my comfort, that time brings every thing to light, and that this love will not be a mystery for ever. Meantime, do not imagine that curiosity alone led me to you. It was a tender anxiety for my brother, whom I am foolish enough to love still, little as he deserves it."

"You are cruel, my dear Madam."

"I see him growing pale, thinner and thinner, see him losing all his cheerfulness, all his gayety ; see him fading away, even in health. How can I remain easy ?"

"Fading away ? My dear Madam Harvest——"

"Just so ; my husband said to me this morning, — this is not well this will not do, if it lasts. Your brother must explain what is the matter."

The widow here felt a sadness which she could with difficulty conceal. He had not explained himself ; and did he avoid this ? did he prefer to nourish in himself this secret sorrow, rather than confess his love ? What should she think of this ? Did he himself disapprove of this passion ? Was her want of wealth, were her children, an objection ?

"I am interested in the affair ; I will not deny it. I had a sister once, whom I lost by the small-pox. Ah ! such a creature, my dear friend. Such softness, such pleasant manners, such goodness of heart. Oh, if I had such a sister now. How I have always hoped that my brother would bring us such a one ! How I should love her on her own account, and for my brother's sake also ——"

"And I," said the widow, "had." And now she drew out her handkerchief, and applied it to her eyes, apparently not without cause.

Madam Lilius was no hypocrite, except that she possessed a degree of dissimulation which is inseparable from the female character, and her tears fell without any restraint, from the fulness of her heart ; but, perhaps, any one who had seen her emotion, might have wondered that it should have been excited by the death of the little eight years' old Amelia, which took place fourteen years ago.

Madam Harvest drew out her handkerchief, but she had in reality no tears behind it. "Let us," said she, "put an end to this conversation. Why should we make each other sad ? We must remember what is gone is gone, and what lies in the grave cannot come back to us."

"It cannot, indeed, come back to us," sighed the widow.

"On the contrary, while there is life there is hope. My brother may not be so far gone as my anxiety makes me think him to be ; at dinner to-day, he seemed to have a tolerably good appetite, and that is not a bad sign" — she smiled — "at any rate, he will not go to Br—. He will, I think, remain here."

"He will remain here ?" asked the widow, and seemed to take some comfort from that expectation.

"I think so. And then my husband, who understands such diseases, will have him under his eye, and will endeavor to restore his strength. Probably he will come to some conclusion, and explain himself. Do you not think so?" and she smiled again.

The widow was thrown into some confusion by this sudden change in the tone and countenance of Madam Harvest. She was almost inclined to think that it was not the brother, but herself, whose love that lady was endeavoring to fathom, and that Mr. Stark had confessed his love to his sister. This idea was strengthened, when Madam Harvest continued, in a cheerful tone, "I shall then, perhaps, have a sister, just such a tender, gentle, amiable sister as I have lost. It seems as if I saw the lovely creature now before me." She had taken the hand of the widow, and gave it a gentle pressure at these last words, while the latter, not knowing what she was doing, and when it was too late, was alarmed at what she had done, not only returned this pressure, but her still moist face was lighted by a soft smile. She was a little angry at the artifice of her friend, and yet she was not. She was displeased at her gay countenance, and yet she was not altogether so; she did not exactly know what she thought herself. But she would willingly have been alone to think over the whole conversation, and to settle with herself, how much or how little of her heart she had betrayed.

Madam Harvest, as though she had read this wish in her eyes, rose to take leave. "It is late," said she; "I must go. Farewell, my good, gentle, tender, dear — on my word, I was within a hair's breadth of saying, sister! You see how full my head is of my brother's affairs of the heart. What do you think? Will every thing be yet right between him and me?"

"Ah, my dear friend, you were never angry with him for a single moment."

"No, truly, no;" and now a warmer, longer embrace followed, than had ever before taken place between them.

In the passage, Madam Harvest, as she was going away, saw the oldest son of Madam Lilius, took him up, and kissed him. The child was lying down, in some little trouble. She formed the sudden idea of desiring his mother to let him come to see her the next day. She wanted to show him to her good old father, who was the greatest friend of children; who would, she knew, be greatly pleased with the pretty face and pleasant manners of the child. "He can," said she, "play with my children, and dine with us." The mother consented, and the boy hopped and danced with joy.

When she returned home, Madam Harvest made her husband, and still more, her brother, happy at the intelligence she brought with her. Particularly was the latter delighted with the assistance which his father had given to the widow; he felt a joy and gratitude at it greater than he had ever felt at even more important kindnesses, which had been shown to himself. But he was discontented that his sister kept back so much of what had transpired in the course of her conversation with the widow; for with all his questioning he could only find out that he

was loved, he was certainly loved, and she, his sister, would answer with her life that he should have a willing yes, as soon as he should ask for it; all that the widow said, and by what feature she betrayed her heart, this was kept from him, lover and brother though he were, by the veil of female delicacy. It was only to the eye of her husband, that this veil was afterward partly raised, and that with a charge of profound secrecy.

CHAPTER XXXII.

THE church service was ended, and the streets were filled with well-dressed people, when one of the little Harvests, from his post at the window, where he had been keeping watch, ran hastily to the door, and now the whole noisy swarm descended to the entry, to welcome with shouts of joy their grandfather, accompanied by their mother. The old gentleman received the little ones with his usual sharp reprimand for their indecent noise, but with a kindness which dispelled, in the same moment, the impression of the reproof. He now began to empty his pockets of sweetmeats, and his purse for their savings boxes, when he saw in the background a pretty boy standing alone, and apparently somewhat sad, and asked his daughter who it was.

"Ah, a dear sweet little fellow," said the daughter, "the oldest son of Madam Liliás, and schoolmate and playfellow of my William."

"Liliás," said the old gentleman, "let me see him a little nearer."

He came, at the desire of Madam Harvest, and went, by her direction, to the old gentleman, whose hand he kissed with propriety and respect, as he had been taught by his mother.

"Really, really, a very amiable boy."

Mr. Stark now gave him a share of his treasures with the others, and put him up on a table which stood in the entry, that he might, as he said, see whether he knew him. "Yes, yes," said he, "dear sweet little one, we are now old acquaintances. See here, my dear daughter, see here, how like that is, the forehead, the chin —"

"Exactly like old Mr. Liliás, without dispute."

"The sport of nature," cried Mr. Stark.

"The order of nature," replied the daughter, and put upon the same table one of her own children, who had actually in the form of his face a striking resemblance to his grandfather. The old man caressed both, and was greatly pleased.

"But," said he, "when good old Liliás smiled, he had a peculiar expression in his upper lip. I wonder if the little one has it. Dear little fellow, be so good as to laugh, do you hear?"

The little boy remained serious, for he had no occasion for laughter, and was not yet refined enough to find occasion in the command.

"I will bring you to it," said the old gentleman, and drew out of his purse a new double ducat, bright as a looking-glass, which he promised to give him if he would do him the favor to laugh. The boy here did not discredit the mercantile race from which he sprung, but smiled

upon the pretty ducat with visible desire to bring it from the strange pocket into his own. Mr. Stark drew him with much warmth to his breast, and kissed him. "See, see," said he to his daughter; "the grandfather, as if he stood before our eyes. Is it not true? There, take it, my dear little fellow, and when you get home, give the pretty ducat to your mother, and beg her to put it in your savings box for you."

At table, the old gentleman was in one of his very best humors, talked and joked with the children, and received the news of his son's recovery and the little journey he had taken for his restoration so well, that his conversation with the Doctor after dinner took place under very favorable auspices.

The Doctor began by congratulating the old gentleman in a sportive manner upon his excellent treatment of his patient's crisis, and said that he had taken the most correct view of the disease."

"Indeed?" said the old man, "have I, do you think, any talent for your art?"

"Talent for it? You are master of it."

"Is all happily over?"

"All, the whole crisis."

"The heart disease, also?"

"Perfectly, entirely, and the heart is in the most fresh, healthy state. Full of love, of gratitude, of respect for a father, who, instead of being angry, as he might have been, only acted nobly."

"But, my dear son, I have not yet quite done with my cure. You have, by many of your accounts of diseases, made me greatly to dread relapses, and I would, for the sake of security, order for my patient one other medicine, which I hope will do him good service."

"The best thing for him now is, for you to do something to strengthen him."

"Do you think so? and by what?"

"By entire forgiveness, with full, fatherly affection."

"If it were not too early for that——"

"No, no; I have taken up the thing after my own head, and I will now carry it out. I will not leave unemployed the advantage, which, by his rebellion, the young man has put into my hands, and that I will now use as I please."

"Was he not always in your hands?"

"Not entirely. I must take other things into consideration. For instance, if as we were situated before, I had said to him, 'Son, this is my will, I insist upon it, do so and so, or I will drive you out of the house, send you to some place which does not please you, to which you have an aversion,' for between ourselves I know very well he had an aversion to Br——, tell me, what would the mother, the sister, yourself, every body have thought of me? A tyrant, a barbarian, a hard unnatural father, I should have been. To treat him so before his fit of ill humor, would have been impossible without harshness; but after this event I can and may so treat him, and I will see who blames me."

"One will, my dear father ——"

"Who?"

"A man who has the noblest of hearts, yourself."

"False, I agree with myself. I will say to my son, our partnership is over; depend upon it no longer; in my house, in my warehouse, you do not come again."

"My dear father," said the Doctor.

"That is settled. It is fixed."

The Doctor was not a little alarmed. "You will, at least, listen to me, I hope, and then I trust, I am certain you will think differently."

"Listen to you? that I will, with pleasure. Here I sit; but as for thinking differently,—you must have something very singular to say to me?"

"Not very singular, but very true."

"Indeed, I am quite curious."

"You cannot find it singular, if I maintain that a single action, to which fortunate or unfortunate circumstances lead a man, can change him entirely, can breathe into him a new soul; one dishonorable, shameful action may for ever degrade a man, one good and great one for ever ennoble him?"

"To what does this refer?" asked the old man.

"You remember what I told you of the conduct of your son at the death-bed of Lilius?"

"It was good, it was noble in him."

"Had you ever expected it in him?"

"Never."

"Certainly, and he himself did not. An unexpected, and to him an entirely new, impression created in him an irresistible feeling. But having once done such an action, will it vanish without trace like a flash of lightning? will it have left no thought behind it? will not the recollection of it have an effect? Believe me, the consciousness of worth, goodness, virtue, which your son took with him from the house of Lilius, has been for ever important to him. It has cured him of his former littleness, vanity, and selfishness, in a great measure, and is still working for his improvement, his perfection. What you have formerly with so much justice charged him with, is now altogether altered. He has left his former companions, dancing and cards are indifferent to him, and he is much less interested in dress; for several months he has had nothing new, for several months he has been no where except to concert halls, the most innocent of all places of amusement. His present desire is to work, to make himself useful, to deserve the respect and consideration of others as well as himself. Is it not undeniable, that this was the operation of that moment, when he himself saw in such a new light virtue in all her dignity and beauty?"

The old man, who listened with great attention, nodded his assent to this developement; and yet it was, if not entirely false, at least very one-sided and unreasonable. The principal figure in the heart of the son, love, was for good reasons left out.

"Even," continued the Doctor, "when he had the folly to oppose himself to you, this does not change my opinion, but rather strengthens it. Because he had become more noble and more elevated, he could no longer bear the treatment which he had before deserved; because he began to feel respect for himself, he desired to enjoy the respect of others, of his father; and thus, from the painful estrangement between you, and the unfortunate want of confidence, which made him think you opposed to all his wishes, came this hasty resolution to leave you, which your wise conduct has made him deeply sorry for. But my best father, will you punish so cruelly a fault committed for such reasons, by such a son?"

"What?" cried the old man, rising with great emotion, "what do you say, my dear Doctor, what are you thinking of?"

"You said he should never again enter your warehouse."

"That he shall not, he must not."

"Are you, then, angry for ever?"

"Angry, I? now on my soul, if all fathers are angry in this way, the young men their sons would do very well."

"But, how did I understand you?"

"I will dissolve the partnership with him, and will set myself down to rest. My house shall be his, my warehouse his. Do you understand now?"

"Yes, indeed!" said the Doctor, joyfully; "if you explain it in this way. The text was dark, the explanation clear as the sun. But as for me, what a fright I have had!"

"Do not rejoice too soon; the conditions are not yet laid down."

"Oh, those will be made by a father — a noble, generous father. I am very easy about them."

"You will think they are ordered for his best good. I now have him, as I said, in my power; and I therefore insist, that he shall be more active, shall carry on the business when it is his own with more earnestness and zeal than he did under my direction. He shall not procure a successor to the book-keeper, who is about to go away, because he can do this work with his own hands, without making the business of the writing-desk too irksome. He must give up rambling about in company and the public places; and to make his home more agreeable, he must get a wife, not a fashionable lady, no slave to dress, no blue-stocking, but a good, domestic, loving wife, whom he can love, and whom I can value and call daughter without blushing. If he comply with these conditions, well. I will give up every thing to him — stay at home and manage the rest of my affairs in quiet. If he will not comply with them, I can do nothing further to help him. I will labor on with my book-keepers, and I will send him, where the young man does not want to go, but where he threatened me he would go, to his Br—. In my house, so long as it remains mine, he never enters again."

"Is this your after-cure, my dear father?"

"It is. Will it be useful to him?"

"He will acknowledge your love and your good judgment in it. Prepare yourself to embrace the most grateful, the most deeply affected son."

"Do you think so? then prepare yourself to see a man who loses house and business, and laughs at it."

"How much do you rejoice me by this resolution."

"But I do not like your opinion of me. What! could I have been angry, angry with my only son, of whom you tell me things which draw tears of joy into my eyes. Angry with him, about whom you long ago had my promise, that if he would do as I wished, it should be my first, my most anxious care, to make him happy? Do you think old Stark would throw such a promise to the winds? Could he break such a promise? Go, go." The old gentleman was making his own preparations for departure. "You have mistaken my heart, discredited my honor, and in revenge" — he seemed to hesitate a moment — "I will not come and see you again for eight days."

The Doctor smiled, and took the hand of the old gentleman — embraces between them were not common. The hearty pressure of his hand, which he received in return, convinced him of the great satisfaction with which his favorable representation of the change of feeling in the son, had been heard. He was more fully convinced of this by the present which he received the same evening, — a great basket full of choice old Rhenish wine, which the bearer said was to brighten the wits of the Doctor.

CAUSES OF DEATH IN ENGLAND AND WALES.

THE Appendix to the "Third Annual Report of the Registrar-General of Births, Deaths, and Marriages in England," has just been published. The following abstract of this document is abridged from the London Times. It is a document of great value, containing an immense body of facts connected with the important and almost universally interesting subject of public health. The report is drawn up with great care, under the superintendence of Mr. W. Farr, of whose talents for the task imposed upon him we spoke in terms of deserving eulogy last year, when reviewing a similar document. It appears from Mr. Farr's letter, that the deaths in 1839 were not so numerous as in 1838, but that the number of cases in which the causes were specified scarcely differed in the two years.

In 1838, the causes of 330,559 deaths were stated; in 1839, 330,497. The coincidence is said to arise from the cause of death having been more generally registered in 1839; for the total number of deaths in that year was 3,550 less than occurred in 1838. In 1838, the deaths were 342,529; the causes of 11,970 were not specified. In 1839, the deaths were 338,979; and the causes of 8,482 were not specified.

Taking the facts connected with the increase of population into consideration, it appears that the mortality in 1839 was lower than in the preceding year. The small-pox and typhus fever did not prevail so generally, and the winter was milder. The diminution of mortality in the two sexes was 2 1-2 per cent. : 2.4 per cent. among the males, and 2.6 per cent. among the females.

In all the calculations a correction is made for the increase of the population, and the 8,482 deaths in which the cause was not specified, are assumed to have happened in the same way as the 330,497 in which the causes were registered.

The number of diseases from the class of epidemic, endemic, and contagious diseases, was 65,343; and the mean rate of mortality per 1,000 by the class was 4.25; in 1838 it was 4.52. The decrease was in small-pox and typhus, 16,268 persons having died of small-pox in 1838, and 9,131 in 1839; 18,775 of typhus in 1838, and 15,666 in 1839. On the other hand, 6,514 children died of measles, and 5,802 of scarlatina, in 1838; while 10,937 died of measles, and 10,325 of scarlatina, in 1839. Hooping cough declined. Croup, thrush, diarrhœa, dysentery, cholera, influenza, and erysipelas, remained stationary; none of them assumed the epidemic form. Ague rose from 44 to 95. In 1838, 16 males and 8 females died of hydrophobia; in 1839, 11 males and 4 females perished in the same way. Out of a population of 100,000 of each sex, 432 males and 418 females died of the epidemic class of diseases; but when the comparison is instituted between the deaths alone, the proportions are reversed. In 100,000 deaths of males, 19,368, and in 100,000 deaths of females, 20,189 were from the same class of diseases.

The mortality from diseases of the nervous system was 3.2, in a population of 1,000 (500 of each sex;) in 1838 the mortality by every disease of this class, except epilepsy, insanity, and delirium tremens, was higher. From an accidental circumstance, too many deaths are ascribed to chorea in the present abstracts; the proportions were very nearly the same as in 1838. The diseases of the nervous system were 25 per cent. more fatal to males than to females, the rate of mortality among males having been 3.6, among females 2.8, in 1,000.

It appears that 90,565 persons died by diseases of the respiratory organs; the class comprises 27 per cent. of the deaths; and 59,559, or 18 per cent. of the deaths, the causes of which are specified, were by consumption. At the adult age, when consumption chiefly prevails, the numbers of men and women living are nearly equal; yet 31,453 females, and 28,106 males, died of this disease. The annual rate of mortality by consumption was, males, .003,722; females, .004,015. In 1838 it was, males, .003,783; females, .004,077; denoting a slight decrease, which was more obvious in the other diseases of the class. 659 deaths were ascribed to quinsy. This augmentation in the inflammatory affections of the throat was probably connected with the epidemic of scarlatina.

The number of cases registered as diseases of the heart, or of the organs of circulation, increased from 3,562 to 3,788.

20,767 persons are returned as having died by diseases of the digestive organs, namely, 3,990 by diseases of the liver, 29 by diseases of the spleen; 4 by diseases of the pancreas; and 16,744 by diseases of the stomach and intestines. In 1838, 420 persons died of diseases of the skin, and in 1839, 448 were destroyed by the same affection. Fevers attended by eruptions, such as small-pox, measles, scarlet fever, erysipelas, &c., were fatal in 1838 to 29,787; and in 1839 to 31,533 persons. Childbirth was fatal to 2,915 women; out of 1,000,000 females living, 368 died of this cause in 1838, and 372 in 1839. About 5 births in 1,000 prove fatal to the mother. This class of deaths does not appear to diminish in amount. Diseases of the joints, bones, and muscles, destroyed 1,098 males, and 922 females. Deaths of persons returned as dying from "inflammations," without specifying the part affected or the nature of the attack, amounted in 1838 to 5,816, and in the following year to 4,940.

The part of the report which refers to the subject of "violent deaths" is extremely important. The facts which illustrate the subjects of suicide and sudden death are of great value, and deserve the attentive consideration of the profession, and all persons interested in the study of latent diseases, and the physical and mental causes which operate in producing a disposition to commit self-destruction. Scarcely a day elapses without there being recorded in the ordinary channels of communication the particulars of a number of "sudden deaths" and "suicides." Persons in the prime of life and apparently in the enjoyment of excellent health, are unexpectedly summoned to surrender to the grim tyrant, death. Hitherto, little or no consideration has been paid to this subject. It is the same with regard to the disease of suicide; for whether the impulse to commit self-murder be the result of mental or physical causes, it is still a disease. The deaths referred to violence in 1838 were 12,055; in 1839 they amounted to 11,980. It appears that there were less suicides committed in 1839 than in the preceding year; but the proportions at different ages, in different parts of the country, and in the seasons of the year, remained unchanged. Before, however, going into the subject of suicide, we would observe, that it is truly appalling to consider the number of persons annually consigned to a premature death by violent causes. It appears that 12,000 deaths occur in this country from violence, which imply at least 125,000 severe accidents. Surely this statement clearly points out the want of a medical police in this country, to protect the public from these unnatural causes of death.

Mr. Farr gives an abstract of 5,519 cases of violent deaths, showing the ages of the persons. From the table it appears, that of that number two-thirds of the males were aged 20 and upwards, while less than half of the females were of that age. Under 20, the number of males was 1,311; the females, 853. At the age of 20 and upwards, the males were 2,650; the females, 705. Nearly half (5,315) of the violent deaths in the country happen to men above 20 years of age; 44 per cent. are 20 and under 60; so that, exclusive of suicides and the

deaths at sea, 4,367 men in the prime of life are cut off every year in England by injuries and accidents of various kinds; 86 sailors, watermen, or fishermen, died violent deaths; 21 engineers, stokers, and firemen were killed in one year in the metropolis, and that chiefly in the steam-vessels on the Thames. It is supposed that 1,000 lives are annually lost in sailing-vessels alone, by shipwreck. It will be found that 2,454 persons are drowned every year in England.

The violent deaths of men whose occupations are carried on above the level of the earth, are most generally the effect of falls. Of 3,146 cases of violent deaths, 2,371 were pronounced accidental; 388 were ascribed to human agency; and in 387 cases the verdicts did not state whether the death was the result of suicide, accident, or murder.

Violent deaths are least common in the agricultural districts, more frequent in cities and manufacturing places, and most fatal in the mining parts of the country. Abstracts have been made to exhibit an analysis of the causes of violent deaths in the Metropolis, (two years,) Manchester, Liverpool, Birmingham, Norfolk, and Suffolk, and the principal mining districts of the kingdom. The following results have been deduced from the detailed tables:

Table of the Number of Violent Deaths, including Suicides, out of 100,000 Persons, by Various Causes, in the Metropolis, in Manchester, Liverpool, and Birmingham; in Norfolk, and Suffolk, and in the Mining Districts:

CAUSES OF DEATH.	Metropolis, (two years.)	Norfolk and Suffolk.	Manchester, Liverpool & Birmingham.	Mining Dis- tricts.
<i>By Mechanical Injury.</i>				
Gunshot wounds,	0.7	1.0	0.7	1.0
Other wounds,	2.6	1.6	2.4	1.0
Fractures and contusions,	21.6	20.6	35.0	53.2
<i>By Chemical Injury.</i>				
Explosions, scalds, burns, lightning,	14.6	20.7	28.3	38.8
Poisons,	3.3	2.2	4.0	1.8
<i>By Suspension of Respiration, (Asphyxia.)</i>				
Drowning,	16.4	19.4	17.5	21.9
Hanging,	4.7	3.5	4.0	1.4
Mephitic gases,	0.2			0.9
Suffocation,	2.7	2.9	3.3	0.6
Total,	66.8	74.8	95.2	120.6

It must be borne in mind, in reasoning on these facts, that where the mortality is augmented, the increase occurs exclusively in certain occupations, while the calculations are based upon the entire population. The mortality of accidents occasioned by those occupations is, therefore, much greater than it is represented to be in the tabular proportions, which vary not only with the danger, but with the relative number of persons engaged in the dangerous trade. More violent deaths, for instance, occur in the midland mining districts, than in the north; which may be accounted for either by the greater fatality of the works in the former, or the greater density of the mining population.

	Population, 1831.	Violent deaths in one year.
Mining parts of Shropshire, Staffordshire, and Wales,	306,614	541
“ “ “ Northumberland and Durham,	318,941	340
“ “ “ Cornwall,	239,379	283

Whether violent deaths are on the increase is a question of some interest. The London bills of mortality, so far as they can be relied upon, furnish data for obtaining some approximation to the proportion of deaths by violence in the metropolis to the deaths by all causes, from the middle of the 17th century :

	1647 to 1700.	1701 to 1749.	1750 to 1799.	1800 to 1829.
Drowned,	3,448	3,943	5,679	3,635
Burnt or scalded,	419	384	744	1,150
Suicide,	901	1,978	1,571	1,090
Killed,	3,520	3,120	3,546	2,632
Murdered,	683	419	218	99
Poisoned,	96	115	76	109
Smothered and suffocated,	108	151	288	216
Executed,	1,043	681	935	595
Found dead,	478	1,770	510	406

The inferences which are drawn by Mr. Farr from the above table were, that in the first period, (1647 – 1700) the annual rate of mortality was about 7, in the second 5.2, in the third 5, in the fourth, 3 per ct. ; and it may also be deduced that, in the 17th century, 6.8 in 100,000, in the 18th century 5.4, in the 19th century 5, died violent deaths. Out of a given amount of population, the deaths by drowning increased in the latter half of the 18th century ; the deaths by scalds and burns were twice as great in 1800 – 1830 as in the 17th century. The tendency to suicide remained nearly stationary ; so did death by poisoning. All the deaths by personal violence rapidly decreased. In a population of 100,000, about 23 were killed, 4.6 murdered, in the 17th century ; in the 19th century, 13 were killed, and 0.5 were murdered. The chance of being murdered diminished ninefold. The executions were more frequent in the latter half than in the beginning of the 18th century ; compared with the population within the bills of mortality, they were not half so frequent in the first 30 years of the 19th century as in the latter half of the 18th century, when about 7 were executed annually to a population of 10,000. Relatively to the murders, the number of executions increased.

In the report, an interesting table is given, showing the number of violent deaths in Sweden, Prussia, and France, as given in the official returns. In Sweden the violent deaths amount to 8.2 in 10,000 annually. The mines and lakes of Sweden make the violent deaths numerous. 947 persons (792 males, and 155 females,) were drowned every year. The mortality from violent deaths is much greater in England than in any nation in Europe. In order to account for this circumstance, Mr. Farr observes, “relatively to the population of England, few countries have such an extent of coasts, rivers, and ca-

nals, or so many men employed in navigation ; so many fires, furnaces, and chemical processes in operation ; medicines and poisons distributed in so many shops, so many mines, manufactories, or buildings ; so many horses, carriages, and railways ; such a vast amount of force and power of every description at its disposal. The great number of violent deaths in England may, therefore, be accounted for on the assumption that the danger in the manufactories, mines, and conveyances, is the same as in other countries ; but that the frequency of exposure to it is greater."

The reflections entertained in the following extract cannot be too widely and generally diffused. How much of human suffering, how much anguish of mind, would be spared to us were we to exercise, in the ordinary transactions of life, a prudent caution ! Two thirds of the cases of violent or accidental deaths which annually occur are clearly the result of gross and unpardonable carelessness. In the Swedish abstract, to which we have previously alluded, it is stated, that from the year 1810 to 1830, 378 infants were suffocated (overlaid) through the gross negligence of nurses. In England a great number of infants are annually killed in the same manner. Mr. Farr says :

"The knowledge of the accidents to which people are exposed in different occupations, may put them more on their guard against danger. Men who work at a considerable elevation from the earth will learn caution from the number of deaths by falls, and will, perhaps, indulge less in intoxicating drinks, (which are the cause of so many accidents,) or in any thing which makes the step or head unsteady. In the metropolis, in two years, 142 males, and 285 females, died by burns ! This is to be ascribed to the greater combustibility of the dresses of females : their caps and gowns frequently take fire. Many children are burnt from the same cause. It deserves the consideration of manufacturers, whether cotton and linen may not be made by a chemical solution as little liable to take fire as textures of wool. It may render parents and servants more careful to state that many children, under five years of age, are suffocated by drinking boiling water out of the tea-kettle ; are burnt to death or disfigured for life, from being left alone at the fire, without a guard ; and that many children are poisoned by drinking medicines, or drugs, left within their reach. 500 or 600 persons are ascertained to die by poison every year in England ; besides the cases of poisoning which are never detected. These are not like the other violent deaths. The poisons are of very little use, except in the hands of medical men ; and may, without any disadvantage, be placed beyond the reach of the majority of persons, by whom they are employed for self-destruction, or murder. Arsenic, mixed with food, cannot be tasted, and is fatal in very small quantities ; yet it is obtained with almost as much facility as sugar, by servant girls, in the small chemists' shops. About 100 fatal cases of poisoning by arsenic are detected every year. It is generally asked for 'to kill rats ;' but it is questionable whether arsenic kills more rats than human beings ; and, if the destruction of rats is a matter of so much impor-

tance it may be effected in other ways. The suicide, or murderer, would, it is true, often resort to other means, if poison were inaccessible; but he would not always do so; and many of the 'accidental deaths,' which now occur from taking poison by mistake, would be prevented. The taste of opium cannot easily be disguised; hence it is less used by the murderer than the suicide. Small quantities of opium are fatal to infants; and mothers, and nurses, frequently give children over-doses of laudanum, or elixir, and quack medicines, in which it is mixed up in uncertain quantities. It is admitted by those who have paid most attention to this subject, that the system of pharmacy in England, and the sale of poisons, requires revision. The sale of prussic acid, opium, nux vomica, oxalic acid, corrosive sublimate, and arsenic, to the public, may be prohibited, or be permitted only by medical prescription. The master's certificate may be required for sugar of lead, and poisonous substances employed in the arts and manufactures. The immense number of deaths by drowning, (about 2,400 annually,) arises, in part, from the neglect of the art of swimming, even by persons who are frequently on deep waters."

CHRONOLOGY.

FOREIGN.

CHINA. Our news from China is from Macao to 12th of October. The capture of Amoy, mentioned in our last number, [Mon. Chron. Vol. III. p. 40,] is confirmed. We copy part of Sir Henry Pottinger's Circular announcing the event.

"Her Majesty's Plenipotentiary, &c., has the highest degree of satisfaction in announcing to her Majesty's subjects, and others who feel an interest in the question, that the city of Amoy, with its very extensive and formidable line of batteries, and fleet of gun-boats and war-junks, (the whole mounting upwards of five hundred pieces of cannon,) was taken possession of on the 26th inst., (Aug.) after a short but animated defence on the part of the Chinese, by her Majesty's naval and land forces, under the command of their Excellences Rear Admiral Sir Wm. Parker, K. C. B., and Major-General Sir H. Gough, K. C. B.

"This brilliant achievement has been happily accomplished with a very trifling loss; and, in addition to the works, all of which have been dismantled and destroyed, and the guns spiked and broken, immense magazines full of munitions of war have been either removed, or rendered useless.

"Arrangements are now in progress for leaving a detachment of troops on the small island of Koolangsu, (which is separated from the town of Amoy by a channel of deep water,) and some of her Majesty's ships will remain at this port, whilst the great body advances to the northward, so that British ships or other ships, that may touch here during the ensuing season, will find ample protection, and be secure from any risk of molestation."

The following extract from a letter written by one of the English officers, gives some interesting particulars of the manner in which the capture was effected:

"We got to Amoy on Wednesday eve-

ning about sunset; ran in past the islands that were fortified outside, and anchored out of gun-shot of the batteries. The Chinese have not been idle; from the town to the beach, running along it for one mile, is a low stone fort with a hundred guns; the stone is all covered, except the embrasures, with mud, which gave the Alligator the idea that it was only mud.

"Beyond this there is a range of forts extending about two miles further, with batteries, some of 20 and 30 guns. The island of Koolangsu, opposite the town, is fortified with different batteries of heavy guns, about 80; opposite, on the north-west side of the bay, is defended with a long range of forts, extending about two miles; these, by-the-by, were out of range from the ships, but not when the *Blonde*, *Druid*, and *Modeste*, passed them to engage the island of Koolangsu.

"The Chinese shot from this fort passed over our ships, but ours did not reach the shore. As the light squadron advanced, the *Wellesley* and *Blenheim* ran along the whole line of forts about 400 yards from the shore, and 5 or 600 from the batteries; these did not fire, although the Chinese gave it to them pretty briskly, cutting away a good deal of their rigging, but doing no other material harm.

"The two line-of-battle ships then anchored by the stern, commenced firing, and soon knocked over the few batteries made of stucco; but as to the stone ones we made but little impression, from their immense thickness, except now and then turning over some guns, and opening one or two small breaches, although the firing, every one agrees, was admirable.

"You will hardly believe that the Chinese stood to their guns to the last, and only started when the soldiers entered the fort at the outside angle, and the marines at the other. One mandarin, whom I had watched all the time, walked quietly down to the beach and drowned himself; another cut his throat as he saw our men in possession of the batteries.

"The Chinese, men, women, and children, ran helter skelter over the hills, leaving every thing behind."

COMMERCE OF CUBA. The commercial statistics of the island of Cuba for the year 1841, show a considerable increase of trade over that of previous years, and that the island is rapidly approaching to considerable commercial importance. The total amount of imports during the year is \$34,476,617, in the following ratio:

Liquors, provisions, spices, products, bread stuffs, oils, fish, &c., \$9,776,428; manufactured cotton, woollen, linen, leather, and silks, \$7,740,074; lumber, \$1,331,015; precious metals, \$1,691,856; sundry freight, \$4,160,815. This shows an increase of nearly three-quarters of a million over the imports of the previous year. The exports of the island during the same period amount to \$47,242,484, and shows an increase of over a million of dollars over the previous year. Of these exports, \$21,300,701 were the products of the island: sugar, coffee, molasses, rum, wax, tobacco, cigars, copper, &c., and \$25,941,783 in foreign products. The principal part of this trade was carried on by Spanish and American vessels; the latter carrying \$5,654,125 worth of the importations, and about the same amount of the exportations, which is nearly double the trade done through English vessels. About two-thirds of the entries were made at the port of Havana, the principal part of the remainder at the ports of Cuba, Matanzas, and Trinidad. The trade of this island is free, and its currency gold and silver, so that there is but little fluctuation in the markets. Its statistics of trade show a gradual and steady increase every year, which, from its policy and currency, is protected from revulsions, which thwart the commercial prosperity of other places.

YUCATAN. We learn from authentic verbal information, that the province of Yucatan has relapsed into a state of dependence upon the Mexican Government. We learn further, that when the Yucatanese Congress decided upon acknowledging the supremacy of Mexico, the event was celebrated at Merida, and the other towns in the province, by the firing of cannon, illuminations, and other manifestations of rejoicing. The precise terms upon which the reannexation was effected, have not transpired; but they have reference to certain privileges of local legislation, which Santa Anna has conceded to the province of Yucatan.

BRITISH WEST INDIA STEAMERS. Four of the West India Steam Packets have left England on their passage for America, viz., the *Forth*, sailed at 1 o'clock P. M. of December 16, for Havana, calling at Nassau, to proceed to New Orleans, Tampico, and Vera Cruz, and thence to return to Havana; 2d, the *Solway*, which sailed on the afternoon of the 18th for Barbadoes, and to proceed thence by way of Martinique, and Guadaloupe, St. Thomas,

Hayti, and Jamaica, to Belize, touching various other ports, and to return to Havana; 3d, the *Tay*, on the same day for Barbadoes, Trinidad, Porto Cabello, Carthagena, and thence to Jamaica; and the 4th, the *Clyde* to touch at Madeira, Surinam, Demerara, Barbadoes, and Grenada. The *Solway* arrived at Barbadoes January 6, in nineteen days from Southampton, and the *Forth* at Havana on the 12th, in twenty-six days. The *Forth* proceeded to the Balize, where she arrived and delivered her mail January 19, and returned to Havana. Feb. 2, she sailed from Havana, touched at the Balize Feb. 4, and left early the next morning for Tampico and Vera Cruz. The *Solway* left Havana February 2 for Vera Cruz; left that place on her return on the 7th, arrived off the Balize on the 11th, lay there in a dense fog till the evening of the 12th, and not meeting with the *Eliza*, which had been despatched with passengers and the mail on the 9th, proceeded to Havana. The *Tay* arrived at Havana February 1, from Falmouth, by way of Barbadoes, and other West India islands.

DOMESTIC.

COLUMBIA RIVER, OREGON TERRITORY, July 11, 1841. The U. S. ship *Peacock*, of the Exploring Expedition, was lost about noon on the 11th of July, on the north bar of Columbia River. By day-light the next morning, the water had risen to the berth-deck. They lost two boats, but succeeded in getting out the rest, and in reaching the shore, though the passage was extremely perilous. The purser secured his books and papers, and the naturalists their journals. A few hours afterwards, no trace of the ship was to be seen.

The brig *Thos. Perkins* was purchased by Capt. Wilkes to bring home the officers and crew. He rechristened her the *Oregon*. She arrived at San Francisco, Upper California, a rendezvous for the squadron, on the 19th of October, and remained there through that month. The squadron will return to the United States by way of Manilla, Singapore, and the Cape of Good Hope.

BANKS OF MAINE. According to the abstract of Bank Returns, laid before the Legislature of Maine by the Secretary of State, it appears that the number of Banks now in operation in that State, is 40, with an aggregate capital paid in of \$3,414,000. The amount of bills of all the banks in

circulation on the 1st of January last, was \$1,585,820; deposits not on interest, \$792,598, and deposits on interest, \$118,318. The amount of gold and silver in the banks was \$183,861; balances due from other banks, \$551,395; bills of other banks in the State, \$108,978, and of banks out of the State, \$36,051. Real Estate, \$216,968. Notes discounted, and other debts to the banks, \$4,987,519. The amount of the last semi-annual dividends was \$102,180.

WASHINGTON, Jan. 29. Hon. Nathan F. Dixon, a Senator in Congress from the State of Rhode Island, died, after a severe illness of several days. Mr. Dixon was born in Plainfield, Conn., in December, 1774. He was graduated at Rhode Island College in 1799, and in 1802 settled in that State, for the practice of the law. In 1813, he was elected a member of the General Assembly of that State, and was reelected by the same constituency at thirty-four successive elections. In 1838, he was elected to the United States Senate, his term beginning on the 4th of March 1839.

PROVIDENCE, R. I., Feb. 7. The legislature chose Hon. W. Sprague to be Senator in Congress in place of Mr. Dixon, deceased.

BOSTON, Feb. 8. A public dinner was given by a number of the young men of this city to Mr. Charles Dickens, the celebrated Englishman, who arrived in this country by the January steam packet. The enthusiasm excited by Mr. Dickens's arrival has never been equalled by the feeling aroused by any other person, whose distinction rested only on literary claims. His writings, however, have so perfectly and constantly addressed themselves to all classes, they have evinced such a true and beautiful philosophy in their exhibitions of human nature, they have done so much to raise the character of the lowest classes of society, and of mankind, that he is looked upon with the enthusiasm which a benefactor of his race ought to excite, rather than with the cold feeling of curiosity which would greet one who was only a successful novelist.

Mr. Dickens left Boston for Hartford, New York, and the South, on the 12th.

PROVIDENCE, R. I., Feb. 14. The "Constitutional Convention," [Monthly Chron. Vol. III. p. 46.] met again. Mr. Dorr offered a resolution, that as a constitution had been adopted by a majority of the citizens, framed by another convention since the adjournment, this conven-

tion should proceed no further. On the 15th, this resolution was rejected, after debate, yeas 11, nays 51.

The "Constitutional Convention," after a week's session, adjourned sine die, recommending to the people an amended constitution, which is to be submitted to them on the 21st, 22d, and 23d of March. The following is a summary of its most important provisions:

The right of voting for all general officers, Senators, and Representatives, is extended to all white male citizens of the United States, who have resided in the State two years, and in the town where they offer to vote six months; and upon one year's residence to those possessing the present freehold qualification. No person can vote on any question of taxation, unless he be taxed for at least \$150, or unless he possesses the freehold qualification. Foreigners may vote who have resided here three years after naturalization, and possess the freehold qualification. The usual exceptions are made of paupers, lunatics, &c., and persons in the service of the United States, residing in military stations, and on land of the United States. The General Assembly shall provide for a registration of voters, and may admit to the right of suffrage, upon such conditions as they may deem proper, natives of the United States, who have resided there two years, not qualified by the constitution.

The General Assembly will hold its sessions at the same time and places as at present. They cannot incur State debts without the consent of the people, to an amount exceeding \$50,000. Whenever they impose a direct tax, one-sixth shall be assessed on the polls of the qualified electors.

The House will consist of seventy-seven members. Providence has eight; Newport, Smithfield, and Warwick, each four; North Providence, Cumberland, and Scituate, three each; and all the rest two.

The Senate will consist of nineteen members, elected in sixteen Senatorial districts.

Both Senators and Representatives will be elected on the third Wednesday in May, and hold their seats for one year.

The Lieutenant Governor shall, *ex officio*, be a member of the Senate, and the Governor its presiding officer. In certain cases, the Senate chooses its presiding officer.

The Governor has the additional power

of granting reprieves till the end of the succeeding session of the General Assembly, and to fill vacancies in office until they are filled by election.

The General Election is held on the third Wednesday in April, when all the general officers are elected. Voting may be by open or secret ballot, as the General Assembly shall provide. Provision is made for new elections, if the first should fail, and in the second election of Senators, a plurality elects.

All qualified electors are eligible to office. Persons holding offices under the United States, or any other government, cannot be members of the General Assembly, until they may have resigned their seats.

The Supreme Court exists as at present established. They are to hold their seats till a joint-resolution of both Houses, voted for by a majority of all the members elected to each, declares their places vacant. Such a resolution can be entertained only at the session in May. Justices of the Peace are to be elected by the People.

Provision is made for the support of Public Schools, and the money appropriated for that purpose is not to be diverted to any other use, but is to remain a permanent fund.

Amendments are to be proposed by the legislature, and sent out to the people. If a majority of the next legislature approve of any amendment, it is to be sent out to the people at the next annual election, and if then voted for by three-fifths of the voters at that election, it becomes a part of the constitution.

The constitution is to go into effect on the first Tuesday in May, 1842. The annual election under it is to be held on the third Wednesday in April.

Provision is made for existence of the present Government, the validity of all contracts and obligations, and the continuance of the Courts in all judicial proceedings.

The Declaration of Rights and Principles is very full, and embraces all the sound maxims which lie at the foundation of a republican government, and which secure the freedom of the people.

On the 16th, the friends of the "Suffrage Constitution" met and nominated their candidates for State officers. Mr. Thomas F. Carpenter was nominated for Governor; he declined, as did Mr. Burgess; and Mr. Wager Weeden was then nominated.

UNITED STATES CONGRESS

THE PATENT OFFICE. The Annual Report of Henry L. Ellsworth, Commissioner of Patents, has been laid before the House of Representatives. It exhibits the results of its operations for the past year, of which the following is a summary :

Number of Patents issued,	495
“ “ “ expired,	327
Applications for Patents,	347
Excess over last,	82
Number of Patents issued previous to January, 1842,	12,477
Receipts for 1841,	\$31,320
Ordinary expenses,	\$23,065
For the restoration of models, etc.	\$20,507

The report suggests the necessity of a remedy against the frauds practiced by selling patents where none have been obtained, the propriety of patenting designs for articles of manufacture, the expediency of giving authority to Consuls to administer the oath for applicants for patents, of increasing the salaries of clerks in the office, of establishing a night and day watch, and of appropriating the whole building to the legitimate purposes of the establishment.

To our latest dates, the 26th of February, Congress has done little.

Mr. Clay's resolutions for amendments of the constitution, [Mon. Chron. Vol. III. p. 47,] were further debated on the 9th of February; and several days later in the month no action was taken on them however, none indeed was anticipated.

On the 8th of February, resolutions passed the Senate introduced by Mr. Clay, that the Committee on Public Lands inquire into the expediency of providing, that in case any State refused to receive its share of the proceeds of the public lands, that share should be redivided among the other States. This resolution passed by a vote of 25 to 18. It was rendered necessary by the refusal of S. Carolina and one or two other States to receive any money, if any ever be divided under the distribution act.

On the 15th of February, Mr. Clay presented a series of resolutions in the Senate, in the hope, he said, that some of them might be made the bases of laws. They proposed an increase in the rates of the compromise tariff, so as to raise annually \$26,000,000, and to provide by a more economical administration of the government, that the expenses shall not exceed \$22,000,000, the residue being devoted to the

payment of the debt, and the establishment of a reserved fund of \$20,000,000, to provide against deficits in the Treasury. These resolutions were not discussed at the time, but were assigned to the 24th. No action has been taken on them, however.

The bill repealing the Bankrupt law having been lost, [Mon. Chron. Vol. III. p. 48,] a bill postponing its operation came up and was debated in the Senate for some days. It was finally rejected on the 15th by a vote of 18 to 23.

The proposal to censure Mr. Adams for presenting a petition for the dissolution of the Union, agitated the House of Representatives till the 7th of February, to the exclusion of all national business. On the 28th of January Mr. Adams first took the floor in his own defence, and, with several interruptions, he continued his speech till the date named above. The question was one of privilege, and consequently took precedence of all others. It gave Mr. Adams an opportunity of entering at large into the general questions of slavery, and the right of petition. He read documents of every kind, and of every date for several years past, to prove the existence of a southern combination, constantly plotting against the interests and welfare of the Northern States; and did not fail, in the progress of his remarks, to exert his eloquence against every person, who in this connection, or on these subjects, had crossed his path, as a personal and almost a national enemy.

Mr. Adams had not finished his speech on the 7th. He then gave way, however, for a motion to lay the resolution of censure on the table. This course was adopted, 106 - 93. The petition was then rejected, 40 - 106.

This charge and defence excited general interest in all parts of the country; the circumstances admitting of a full discussion of questions on which usually under the rules nothing can be said on the floor of Congress.

The appropriation bills occupied the House through a great part of the remainder of the month. No debate took place in either branch on the schemes for the management of finance; but two Exchequer bills were presented to Congress, one in the Senate and one in the House.

On the 17th of February, Mr. Cushing, from the Committee on Finance, reported a bill for a National Exchequer. It differs materially in some points from that proposed by the Administration, [Mon. Chr.

Vol. II. p. 566,] as will be seen by the following abstract of it :

It proposes that the Board of Exchequer shall consist of the Secretary of the Treasury, the Treasurer of the United States, and one Commissioner, to be appointed by the President, with the consent of the Senate, for four years, with a salary of \$3,000 per annum.

The Exchequer Board to have power to appoint agencies, not exceeding ten in all, viz. at Boston, New York, Philadelphia, Charleston, and New Orleans, and any other five places where the public service may require it. The Board to have a principal clerk, and a register; and each agency a superintendent and register, to be appointed by the President, with the consent of the Senate, for four years; and each superintendent and register to have a clerk, if the business of the agency require it. The Exchequer and its officers to be the general agents of the Government, for the receiving, safe-keeping, and disbursement of the public moneys, and for transferring and transmitting them under the direction of the Secretary of the Treasury, and for paying all warrants, drafts, and orders of the Treasurer of the United States, and disbursing officers and agents having power to make such drafts, and shall perform all the duties of pension agents.

The Exchequer and its agencies to be authorized to receive deposits of gold and silver from individuals, and to issue certificates therefor, but never to an amount exceeding \$10,000,000, the amount receivable to be apportioned among the agencies, according to the extent of their business respectively. They are also authorized and directed to issue certificates to public creditors, in all cases where they may prefer the same [to money] for the amount of debts due to them from the United States, but never to an amount exceeding \$10,000,000, nor exceeding the amount of gold and silver on hand at the agency so certifying. The officers of the several mints are authorized to deliver similar certificates of deposit for sums of bullion or foreign coins delivered for coinage. All such certificates are to be redeemable in specie on demand at the office or mint from which issued, and receivable every where in payment of public dues. These certificates are to be prepared and signed by the Treasurer of the United States, and countersigned by the Commissioner of the Exchequer, to be in denominations from five to one hundred dollars, to be delivered

without premium, of such denominations as the public creditor or the depositor of specie may require, and a statement of the amount outstanding at every quarter is to be published.

The Board and its agencies to be authorized to draw drafts on one another, and sell them at a premium equal to the fair cost of remitting specie, not exceeding two per cent., payment to be always made in cash. The Exchequer and its agencies, when required by the Secretary of the Treasury, to be authorized to purchase private bills of exchange, for the purpose of transmitting the public funds for the payment of public creditors, or for public use, but for no other purpose. No bill to be purchased, nor draft sold by any agency, but by the consent of two of its members. All payments by the Exchequer and its agencies to be made in gold or silver, or with the consent of the creditor, in Treasury Notes, or certificates of deposit. All debts due to the United States, to be paid as aforesaid, or in the notes of banks immediately convertible into specie, at the place where received, and all accounts with banks must be settled, and balances, including all notes, paid every week or oftener.

Private deposits are not to be received nor drafts sold in any state where laws may be passed to prohibit it. The Exchequer Board is to make regulations for the form of business by the agencies, and the duties are to be so arranged, and accounts so kept, that the superintendents and registers shall be checks upon each other. The accounts of transactions regarding the public moneys, and those regarding dealings in exchange and private deposits, to be kept in separate and distinct sets of books. The profits on the drawing of exchange are to be applied to the payment of expenses, and the surplus [if any] to be placed semi-annually to the credit of the Treasurer of the United States.

Suits on bills of exchange, if necessary, to be brought in the name of the United States, in the Circuit Courts, or State Courts. Depositories to be provided in the custom-houses, or other public buildings, if there be suitable apartments, if not, elsewhere. The gross amounts of the public moneys, wherever kept, is to be passed to the credit of the Treasurer of the United States, without deduction of the costs of collection, and such costs to be paid, under appropriations by law, as in other cases of appropriation.

Various penalties are provided for frauds, or misappropriations of the money, or counterfeiting, or falsely issuing the securities of the Exchequer.

On the 21st of Feb., Mr. Tallmadge, from the select committee in the Senate, reported another plan, differing in some of its details.

It proposes to establish in the Treasury Department at the seat of government, a board, to be called the Exchequer of the United States, and to be composed of three Commissioners, to be specially appointed by the President and Senate, and removable only by the President and Senate, for specific causes. The commissioners to have ——— salary, to choose one of the members of their board to be President for two years, and a new election to take place every two years. All inferior officers judged by the board necessary for transacting the business, to be appointed by the Secretary of the Treasury, they to give bonds, and their compensation to be determined by the board until fixed by law.

The board to establish agencies in any of the cities and towns, not exceeding two in any State or Territory. The officers and agents of the agencies, deemed necessary by the board, to be appointed by the Secretary of the Treasury. Their compensation to be fixed by the board until determined by law; and regulations for their government to be established by the board, and accounts to be kept, so that one officer shall be a check upon the others.

The Exchequer, its officers and agencies, to be the agents of the government for the various purposes specified in the other schemes, and particularly for receiving and paying money for the government. All payments to be made "in gold and silver coin or in specie notes," to be issued in the form prescribed, such notes never to exceed the actual amount held for their redemption.

The Exchequer and its agencies to be authorized to receive on private deposit, from individuals, gold or silver coin or bullion, and to issue for the same, specie notes, in the form to be prescribed by the board, which shall be redeemed on presentation at the agency where issued. These deposits not to exceed \$15,000,000, distributed among all the agencies, in proportions to be established by the board. No higher premium for the deposit to be demanded, than shall be sufficient to in-

demnify against the hazard of loss, and never more than half of one per cent. The specie notes to be redeemable only at the place where issued, unless the board shall see cause to order otherwise.

Notes to be prepared by the Secretary of the Treasury, of denominations from five to one hundred dollars, to be signed by the Treasurer of the United States, countersigned by the President of the board, and endorsed by the principal officer of the agency where issued. The notes issued by the board to be endorsed by one of the commissioners, and made payable at the board. The notes, when redeemed, may be reissued.

The board and its agencies may, on the deposit of money in specie, draw bills of exchange for the amount so deposited, payable "at said Exchequer, or any agency where funds are provided on which to draw," and may also accept bills of exchange, to the amount of such actual deposits in specie; such bills and acceptances to be signed and countersigned as the board shall prescribe. On such bills of exchange, and acceptances, a reasonable premium of exchange may be received, not exceeding the fair cost of remitting specie, nor exceeding two per cent. [Nothing is said of any sale below par.]

The board, and its agencies, may take charge of bills of exchange for collection, drawn on any place where agencies are established, but in no case make any payment or advance thereon, until advice of payment shall be received. On their paying over the proceeds, such reasonable charges and commission may be deducted, as may have been agreed upon, not exceeding — per cent.

The Board must, within three months from its organization, establish by-laws for the regulation of its concerns, and the government of its agencies, copies of which must be laid before Congress.

The Secretary of the Treasury is authorized to furnish, on application of the board, a suitable amount of specie notes, for the use of the board and its agencies, to be issued either in payment to public creditors, or to individuals on the deposit of specie, the amount to be issued never to exceed the amount of specie on hand for their redemption. Payments to the Exchequer or its agencies, for dues to the United States or its officers, may be received in gold or silver, specie notes issued under this act, or in notes of banks which shall be immediate-

ly convertible into specie at the place where received. Settlements with banks must be made weekly or oftener, and balances paid, and no credits suffered to stand. Issues of notes must always be so limited, at the board and the agencies, that there shall always be on hand at each, gold and silver to the whole amount of such issues.

The same provision is made as in Mr. Cushing's bill, for keeping double sets of books, for the distinct entry of the public and private business; and also for paying over the profits, and for providing apartments or offices for the several agencies in the public buildings or elsewhere.

The board is authorized to appoint as agent any specie paying bank in any State, provided it shall not think it expedient to establish a special agency in such place. But in such case, such bank shall not be authorized to receive deposits, or to accept or sell bills or drafts on account of the Exchequer.

Full accounts of the proceedings of the board and agencies are to be furnished to the Secretary of the Treasury, as often as he may prescribe, and abstracts must be annually laid before Congress. Full accounts of the transactions of the board to be furnished to Congress when required, and quarterly statements of the amount of specie notes outstanding, to be published. Converting the funds by any officer or agent to his own use, or fraudulently issuing any specie note, draft, or bill of exchange, to be punished as felony.

The Secretary of the Treasury, or his agent, duly authorized, to have power to examine any of the officers or clerks of the Exchequer or its agencies, on oath or affirmation, touching all matters relating to the Exchequer or its agencies; and the Exchequer and agencies to be open at all times to examination by any committee appointed by Congress or either House thereof.

